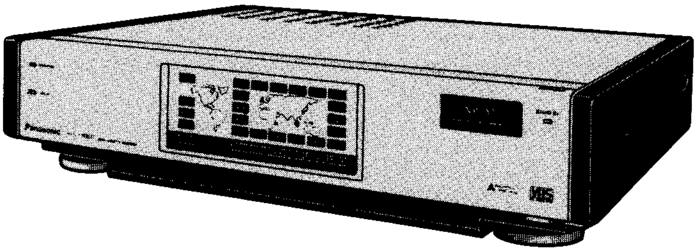
ORDER NO. VRD9011M166

Service Manual

General Description
Adjustment Procedures
Block / Schematic Diagrams
Exploded Views / Parts List

Video Cassette Recorder
Panasonic VHS
PAL SECAM NTSC
Hi-Fi **HQ**

NV-W1E



SPECIFICATIONS

Power Source:		AC 110∼127/220∼240V ±10%, 50/60Hz ±0.5%		
Power Consumption:		Approx. 42 watts (8 watts when turned off)		
Video Recording System:		2 rotary heads, azimuth recording system, NTSC, PAL, SECAM, PAL-M, PAL-N, MESECAM		
TV System:		NTSC/PAL-M 525 lines/60 fields	PAL/PAL-N 625 lines/50 fields	SECAM 625 lines/50 fields
Tape Speed:		SP: 33.35mm/sec. LP: 16.7mm/sec. (PLAYBACK ONLY) SLP: 11.12mm/sec.	SP: 23.39mm/sec. LP: 11.7mm/sec.	SP: 23.39mm/sec. LP: 11.7mm/sec.
Tape Format:		12.7mm wide high density video tape (1/2″) VHS video cassette (with easy playback function for S-VHS cassettes)		
Record/Playback Time:		Maximum 8h. with NV-T160	Maximum 8h. with NV-E240	Maximum 8h. with NV-E240
FF/REW Time:		Less than 5.5 min. with NV-T120		
Modulation System:	Luminance;	FM azimuth recording	FM azimuth recording	FM azimuth recording
	Color signal;	converted subcarrier phase shift recording	converted subcarrier phase shift recording	1/4 countdown
Input Level: (Phono type)		1.0Vp-p, 75 ohm		
Output Level: (Phono type)		1.0Vp-p, 75 ohm		
Audio Input Line: (Phono type)		More than −10dBV (316mV). More than 47kΩ unbalanced		
Audio Line Output: (Phono type)		−8dBV (400mV). More than 1kΩ		
Audio Track:		Hi-Fi stereo; 2 channels, Normal mono; 1 track		
Hi-Fi Sound Specifications:		Dynamic Range; more than 90dB, Frequency Range; 20Hz∼20kHz Wow & Flutter; less than 0.005%		
Dimensions:		464 (W) × 105.5 (H) × 392.5 (D)mm		
Weight:		8.2kg		
Operating Temperature:		5°C∼40°C		
Operating Humidity:		35%∼80%		
Special Playback Speeds:		Speed Search: NTSC/PAL-M about 11× (in SP mode 5×) PAL/PAL-N/SECAM/MESECAM approx. 9× (in SP mode 7×) noise lock Slow: 1/30∼1/5		

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

Panasonic

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.
Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.
Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.
Section 3 contains block diagrams which offers you information for checking and understanding each circuit.
Section 4 contains schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c. ...
Section 5 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

CONTENTS

SPECIFICATIONS .... Cover
FEATURES 1-1
CONTROLS AND COMPONENTS 1-2
  Front Panel 1-2
  Control Panel 1-5
  Rear Panel 1-6
  Remote Control 1-7
COLOUR TV BROADCAST SYSTEMS 1-8

DISASSEMBLY PROCEDURES 2-1
  1. Disassembly Flow Chart 2-1
  2. Detail of Disassembly Method 2-1
MECHANICAL ADJUSTMENT PROCEDURES 2-6
  1. How to Eject Manually 2-6
  2. Removal of the Cassette Compartment 2-6
  3. How to See the Movement of Mechanism without Cassette Compartment 2-7
  4. Mechanical Adjustment Procedures 2-7
  5. Assembly and Adjustment Procedure of Mechanism 2-15
SERVICE INFORMATION 2-20
ELECTRICAL ADJUSTMENT PROCEDURES 2-21
  1. Test and Service Equipment 2-21
  2. Preparation 2-21
  3. Adjustment Procedures 2-22
    How to Read Adjustment Procedures 2-22
    Servo Section 2-29
    Luminance Chrominance section 2-24
    Audio Section 2-29
    Analogue Section 2-31
SERVICING FIXTURES & TOOLS 2-47
CIRCUIT BOARD LAYOUT 2-48
LOCATION OF TEST POINTS AND CONTROLS 2-49

BLOCK DIAGRAMS

OVERALL 3-1
DRIVE & AUTO SYSTEM DETECT 3-2
OVERALL VIDEO 3-6
LUMINANCE & CHROMINANCE PACK 3-10
SUB CHROMA (NTSC 3.58, PAL-N, SECAM) 3-12
PAL/NTSC ENCODER 3-14
SECAM ENCODER 3-16
ANALOGUE 3-18
DIGITAL 3-22
SYSTEM CONTROL & SERVO 3-25
Hi-Fi AUDIO 3-28
POWER SUPPLY & SHORT PROTECT 3-32

SCHEMATIC DIAGRAMS AND CIRCUIT BOARDS

INPUT/OUTPUT SELECT PACK 4-1
INPUT/OUTPUT SELECT PACK C.B.A. 4-3
MAIN (1/2) 4-6
MAIN (2/2) 4-11
MAIN C.B.A./SHORT PROTECT PACK C.B.A. 4-13
LUMINANCE & CHROMINANCE PACK/MESECAM PACK 4-17
LUMINANCE & CHROMINANCE PACK C.B.A./MESECAM PACK C.B.A. 4-22
S-VHS DETECTION PACK C.B.A. 4-25

S-VHS DETECTION PACK 4-26
SUB CHROMA C.B.A. 4-31
SUB CHROMA 4-33
SUB ANALOGUE (2) 4-36
SUB ANALOGUE (2) C.B.A. 4-38
SUB ANALOGUE (1) 4-45
AFC 4-47
PAL/NTSC ENCODER 4-49
SECAM ENCODER 4-52
ANALOGUE C.B.A. 4-55
ANALOGUE (1/2) 4-56
ANALOGUE (2/2) 4-59
DIGITAL C.B.A. 4-63
DIGITAL SLOW & STILL 4-70
DIGITAL 4-72
DRIVE C.B.A./CONNECTION C.B.A. 4-74
DRIVE 4-76
Hi-Fi AUDIO PACK C.B.A. 4-81
Hi-Fi AUDIO PACK 4-83
HEAD AMP PACK C.B.A. 4-86
HEAD AMP PACK 4-89
SWITCH C.B.A. 4-91
SWITCH 4-93
DISPLAY C.B.A. 4-95
DISPLAY 4-97
KEY BOARD SW 4-100
TOUCH PANEL SW 4-102
0.32H & CCD PACK 4-104
SERVO & SYSTEM CONTROL 4-106
SERVO & SYSTEM CONTROL C.B.A. 4-112
POWER SUPPLY C.B.A. 4-115
POWER SUPPLY 4-117
CYLINDER DRIVE C.B.A. 4-119
CYLINDER DRIVE 4-120
REMOTE CONTROLLER C.B.A. 4-121
REMOTE CONTROLLER 4-122
INTERCONNECTION 4-123

EXPLODED VIEWS

1. **Chassis Parts Section** 5-1
2. **Moving Mechanism Section** 5-2
3. **Cassette Compartment Section** 5-3
4. **Casing Parts Section** 5-4
5. **Circuit Board Assembly Part Section** 5-5
6. **Packing Part & Accessories Section** 5-6
7. **Remote Control Unit Section** 5-7
REPLACEMENT PARTS LIST 5-8
Mechanical 5-8
Electrical 5-10

FEATURES

TV System Conversion VTR

Due to the different color TV systems used in different parts of the world, not even the VHS system–by far the world's leading video system for home use–was able to provide playback of video tapes recorded in different TV systems.
By applying advanced digital technology now makes possible playback of tapes in (and conversion between) any of the color TV systems in use today. In line with the fast–advancing international–ization, this comprehensive compatibility gives a tremendous boost to home video entertainment.

Super VHS Playback

This model is possible to playback even S–VHS format by adapting simplefied S–VHS playback circuit. (Playback only for S–VHS)

Equipped with Amorphous Pro Heads

Panasonic's original Amorphous Pro Heads offer twice the magnetic coercivity of conventional ferrite video heads. In addition, their laminated construction greatly reduces dynamic noise, another weakness of ferrite heads. The result is smoother picture with rich detail and brilliant colors in which even the difficult to reproduce red shine with amazing clarity.

HQ (High Quality) Picture System

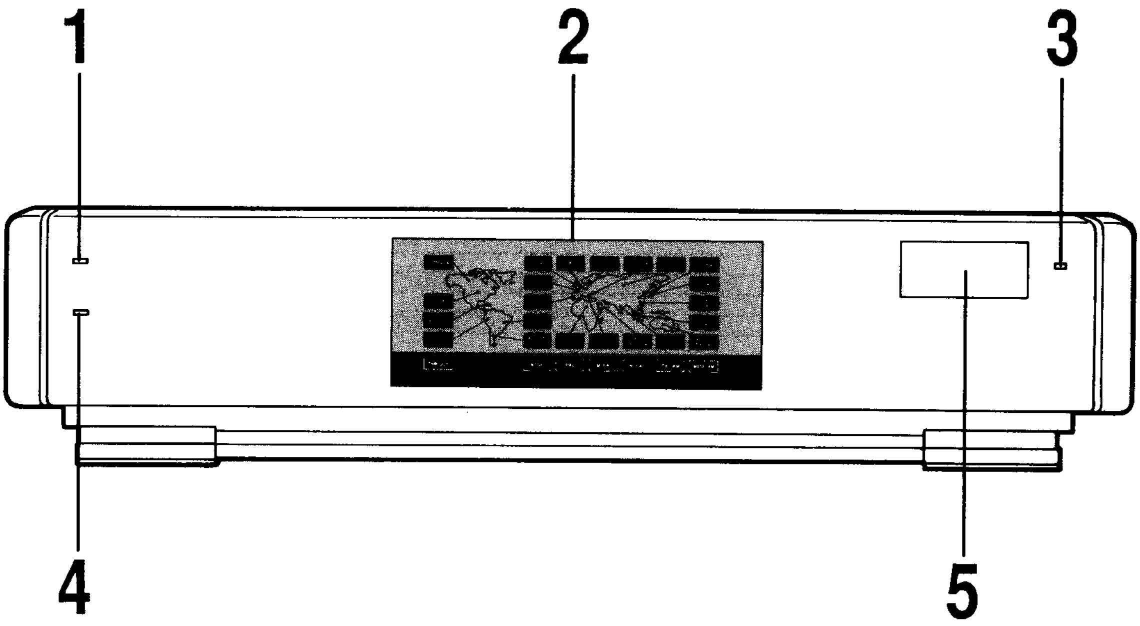
This video recorder features the VHS High Quality Picture System. This system assures complete compatibility with VTRs that use the conventional VHS system.

Dynamic Hi-Fi Stereo Sound System

The Hi–Fi Stereo Sound System using two rotary audio heads prevents signal mixing by recording the audio signal onto a deep layer and the video signal onto the surface of the tape. This system offers three major advantages: dynamic range of more than 90 dB, frequency response from 20 Hz to 20 kHz, and less than 0.005% wow and flutter.

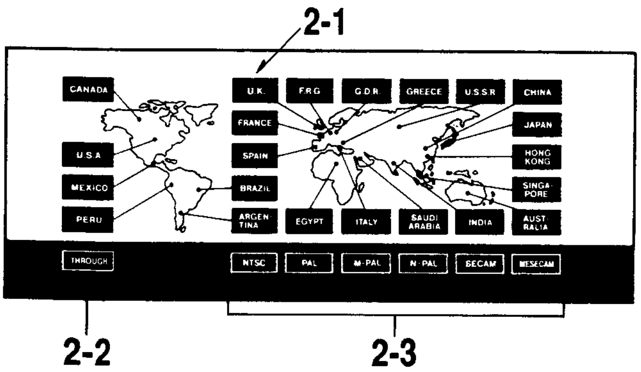
CONTROLS AND COMPONENTS

FRONT PANEL



1 Operation Lamp
It lights up when the power is turned on.

2 TV System Selector Buttons with Indicator Lamps
For selecting the TV system.


2-1
CANADA
U.K.
F.R.G
G.D.R.
GREECE
U.S.S.R
CHINA
FRANCE
JAPAN
U.S.A
SPAIN
HONG KONG
MEXICO
BRAZIL
SINGA-PORE
PERU
ARGEN-TINA
EGYPT
ITALY
SAUDI ARABIA
INDIA
AUST-RALIA
THROUGH
NTSC
PAL
M-PAL
N-PAL
SECAM
MESECAM
2-2
2-3

2–1 If you press the Button for a country, the TV system used in that country will be selected.
* The lamp for that system and the countries using that system will light up.

■ Country Name Indication
The Country Names indicated on the TV System Selector Buttons and Indication Lamps are representative for other countries using the same TV system.

2–2 If the THROUGH Buttons is pressed, the input signals or the signals recorded on the tape can be played back or recorded without system conversion.
* The lamps for the system and the countries using the selected system will light up.

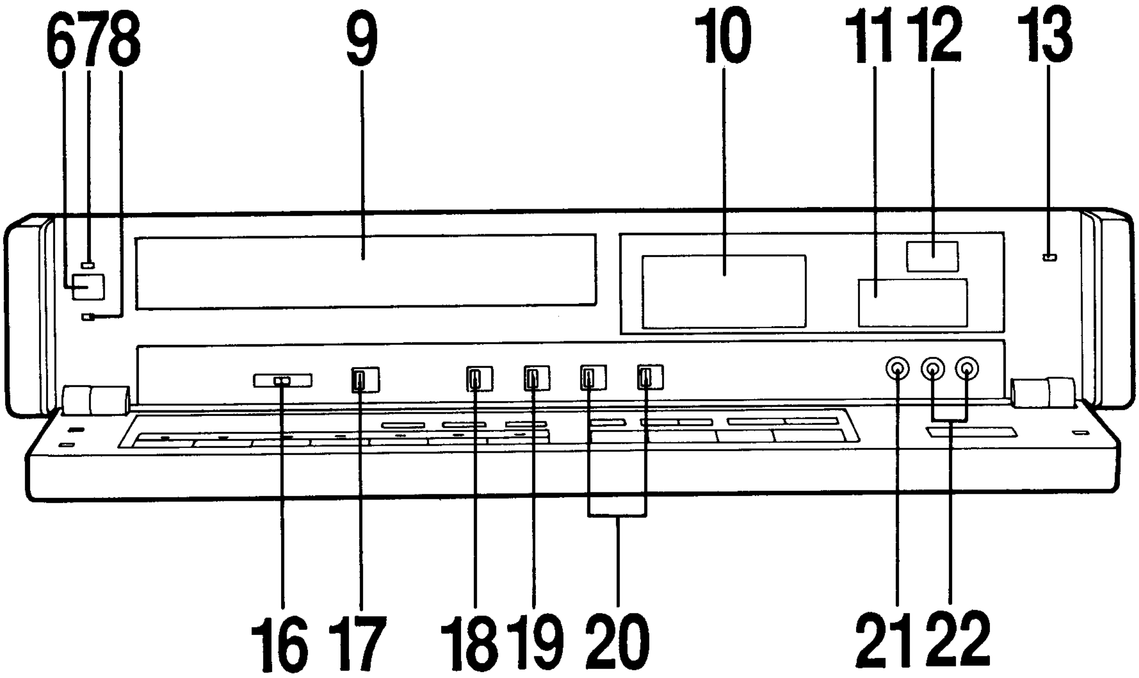
2–3. If one of the System Selector Buttons is pressed, the signals will be converted to the selected TV system.
* The lamps for the system and the countries using the selected system will light up.

Notes:
- * It is not possible to change the TV system during recording or playback.
- * When the N–PAL Button is pressed, the Indicator Lamp for PAL will also light up and the signal will be output in the PAL system.
- * When N–PAL signals are input, the Indication Lamp for PAL will not light up.
- * If you want to watch a program on TV in the N–PAL system, first record it in the N–PAL system and then play it back.

3 Stand By Lamp
It lights up when the AC Power Cable is connected.

4 Tape–In Lamp
It lights up when the power is on and a cassette is inserted.

5 Infrared Receiver Window
Aim the Transmission Part of the Remote control at this Infrared Receiver Window.



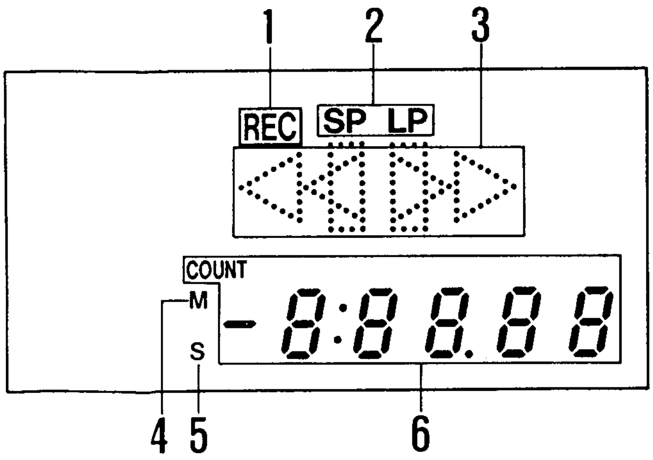
6 Operation Button
Press this Button to turn the unit on and off.

7 Operation Lamp

8 Cassette–In Lamp

9 Cassette Compartment

10 Multi–Function Display
The operation status of the unit is indicated on this Display.



10–1 Recording Indication
It is during recording.

10–2 Tape Speed Indication
The tape speed (SP or LP mode) is indicated.

■ **Recording Time Indication**

Recording Time	Standard	×2	×3
Tape Speed	1	1/2	1/3
NTSC/M-PAL USA	SP	LP	SLP
NTSC	SP	—	EP
PAL/SECAM	SP	LP	—
NV-W1	SP	※LP	

*In the LP mode of this unit, the maximum recording time for NTSC/M–PAL recordings is three times and that for PAL/SECAM/N–PAL/MESECAM recordings is two times that of the recording time indicated on the tape package.

10–3 Operation Status Indication

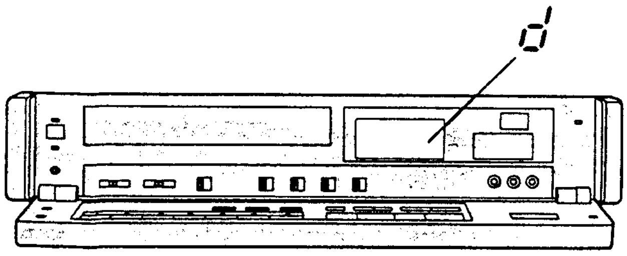
Operation Status Indication

Operation Status	Indication
Playback	▷
Fast Forward/ Cue Playback	▷▷
Rewind/ Review Playback	◁◁
Still Advance/ Still Playback	▯▯
Slow Playback	▯▷
Recording	REC ▷
Recording Pause	REC ▯▯

10–4 Memory Indication
If the "M" Indication is lit and the tape is fastforwarded or rewound, it will stop approx. at the point where the tape counter indicates "0:00.00".

10–5 Search Lock Indication
When the "S" Indication is lit, Cue and Review playback can be performed without having to keep the corresponding button pressed.

10–6 Tape Counter
The elapsed tape time is indicated in hours, minutes and seconds.



Note:

While "d" Indication Is Flashing
The unit does not operate even if operation buttons are pressed.
Depending on the surrounding conditions, it may take several minutes to several hours for the condensation to be dissolved and the "d" Indication to disappear.

11 Audio Level Meter
It indicates the audio level.

12 Infra–red Receiver Window

13 Stand–By Lamp

16 Picture Control
For adjusting the picture quality. When the picture is grainy and contains noise, set the Picture Control to "Soft" to obtain a clearer picture.
* When the Edit Switch is set to "ON", this Control does not work.

17 Edit Switch
This switch is usually set to "OFF". For dubbing, it should be set to "ON".

18 Recording Switch
For selecting the tape speed for recording: SP (standard play) or LP (long play) mode.

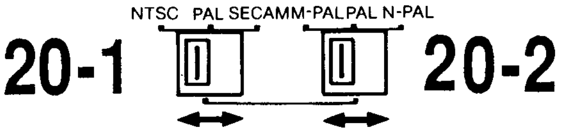
Recording Duration of Different Cassette Tapes

Recording Switch		SP	LP
Indication on the Multi-Function Display		SP	LP
NTSC M-PAL	T120	120 minutes	360 minutes
	T160	160 minutes	480 minutes
PAL SECAM N-PAL	E180	180 minutes	360 minutes
	E240	240 minutes	480 minutes

19 Input Selector Switch
For selecting the equipment connected to the Input Sockets.
LINE 1: AUDIO IN 1/ VIDEO IN 1 sockets on the Rear Panel
LINE 2: AUDIO IN 2/ VIDEO IN 2 sockets on the Front Panel

20 TV System Switches
For selecting the TV system of the input signal.

TV SYSTEM



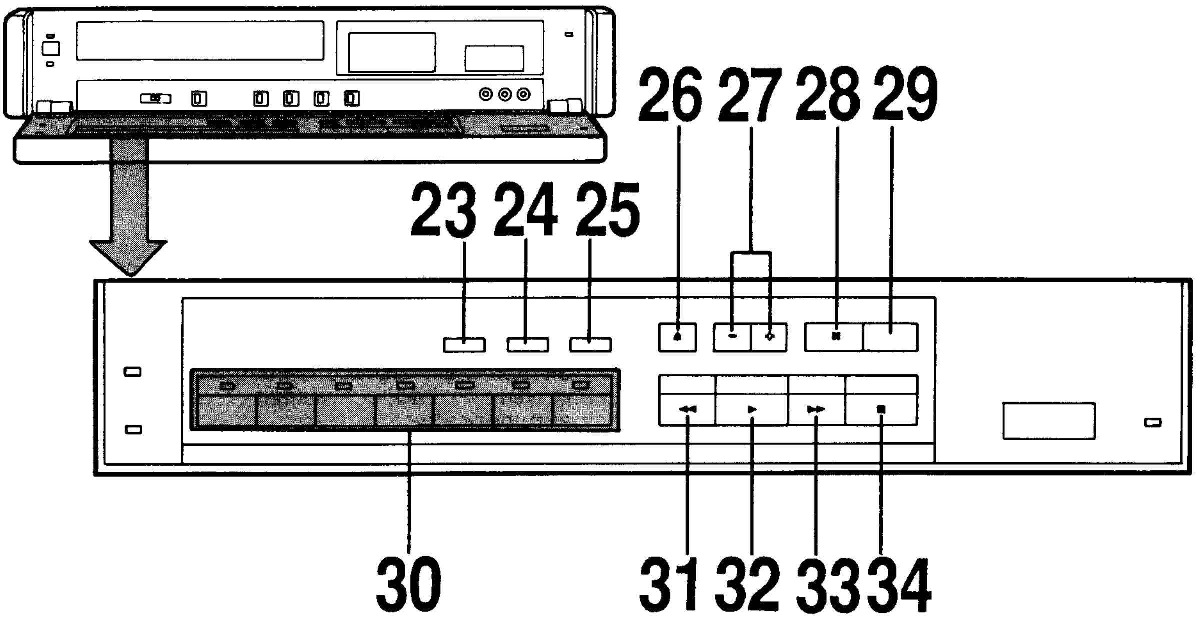
20–1 Select NTSC, PAL or SECAM with the TV System Switch according to the TV system of the input signal.

20–2 If PAL was selected in operation step 1, next select M–PAL, PAL or N–PAL with this Switch.

21 Video In 2 Socket

22 Audio In 2 Sockets

CONTROL PANEL

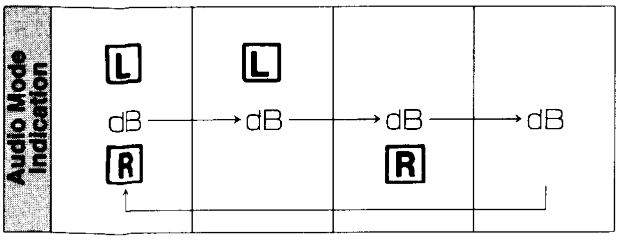


23 Memory Button
For activating the Memory and Search Lock functions. At each press, the indication changes in the order: M—>S—>No Indication —>M...

24 Reset Button
For resetting the tape counter to "00:00.00".

25 Audio Output Selector Button
For selecting the audio track for the sound to be output. At each press, the indication changes in the order: "Stereo" —>"L" —>"R" —>"Normal" —>"Stereo"...

Selecting the Audio Track
At every push of the Audio Output Selector Button , the Audio Mode Indication is changed and the sound corresponding to the indication is reproduced.
When using headphones or a hi–fi stereo system, the playback sound can be changed as follows:



* When the Audio Output Selector Button is pressed repeatedly during playback until neither the Left nor Right Audio Mode Indication is lit, the sound from the normal audio tracks will be reproduced.
* During recording, all sound available from the source will be recorded regardless of the selected audio tracks. The sound recorded on the normal audio tracks is a mixture of Left (Main) and Right (Sub) channel sound.

When playing back a tape recorded on a non–hifi VTR
* The sound from the normal sound track is reproduced. (No Audio Mode Indication will be lit.)
* When playing back a tape recorded on a VTR with linear stereo audio tracks, the two stereo channels will become a single mono channel, and in case of bilingual programs, the two languages will be mixed together.

26 Eject Button
For taking out the cassette tape.

27 Tracking Buttons
When picture noise occurs during playback, adjust the picture with this Button.

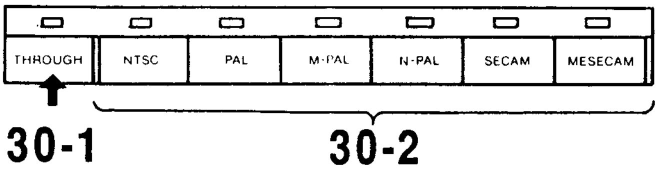
Digital Tracking
Press the Tracking "+" and "−" Buttons simultaneously. The tracking adjustment will be performed automatically.
* Depending on the conditions of the recording, the manual tracking adjustment may offer better results than the digital tracking.

Manual Tracking
When the digital tracking is not effective, and in case of cassettes that require tracking adjustment at every playback start, press the Tracking "+" or "−" Button.
* When the tracking is adjusted manually, the output sound may change from hi−fi sound t normal sound.
* When playing back tapes recorded on another VTR and tapes with recordings of low quality, it may not be possible to completely eliminate tracking problems.

28 Pause/Still Button
Press this button during playback to change over to the Still Playback mode. Press it during recording to change over to the Recording Pause mode.

29 Record Button
Pressing this button starts the recording.

30 TV System Selector Button with Indicator Lamps



30−1 The selection of the desired TV system is the same as described on item 2−2.
* The "THROUGH" Lamp will light up.

30−2 The selection of the desired TV system is the same as descried on item 2−3.
* The Indicator Lamp of the selected system will light up.

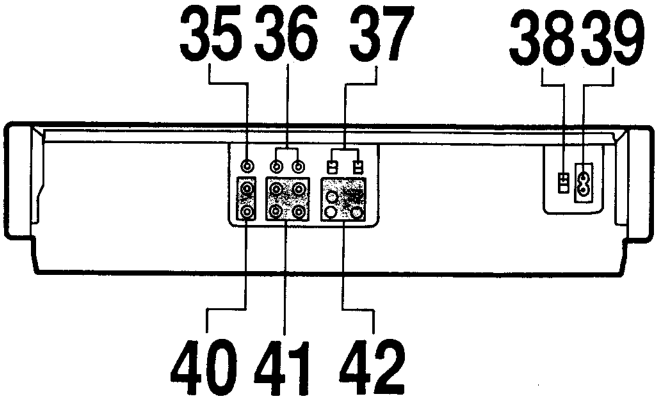
31 Rewind Button
Press it while the unit is in the Stop mode to rewind the tape. Press it during playback to change over to the Review Playback mode.

32 Play Button
Pressing this button starts the playback.

33 FF Button
Press it while the unit is in the Stop mode to fast−forward the tape. Press it during playback to change over to the Cue Playback mode.

34 Stop Button
Press it to put the unit in the Stop mode.

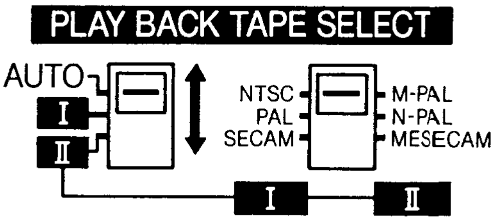
REAR PANEL



35 VIDEO IN 1 Socket

36 AUDIO IN 1 Sockets

37 Playback Tape Selector Switch
Select the TV system with this Selector Switch when the TV system of a cassette to be played back cannot be recognized automatically.
* Normally, this Switch is set to "AUTO".



AUTO ... The TV system is detected and selected automatically.
* However, when playing back a tape recorded in the M−PAL or N−PAL system, be sure to select the M−PAL or N−PAL system manually.

I ...... NTSC, PAL and SECAM can be selected.
II ..... M−PAL, N−PAL and MESECAM can be selected.

Note:
* It may not be possible to obtain a clear picture when playing back tapes recorded in the SECAM/MESECAM system in the LP mode.
* If the quality of the tape be played back is not good, it may not be possible to detect the TV system correctly. In this case, select the correct TV system with the Playback Tape Selector Switch on the Rear Panel.

38 Voltage Selector Switch
Use a screwdriver to set this switch to the voltage range that covers the AC power voltage of the country in which this VTR is to be used.

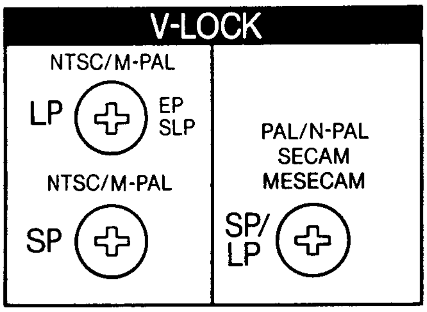
39 AC Power Input Socket
Connect the supplied AC Power Cable.
* Insert the Plug of the AC Power Cable as far as it will go.

40 VIDEO OUT Socket

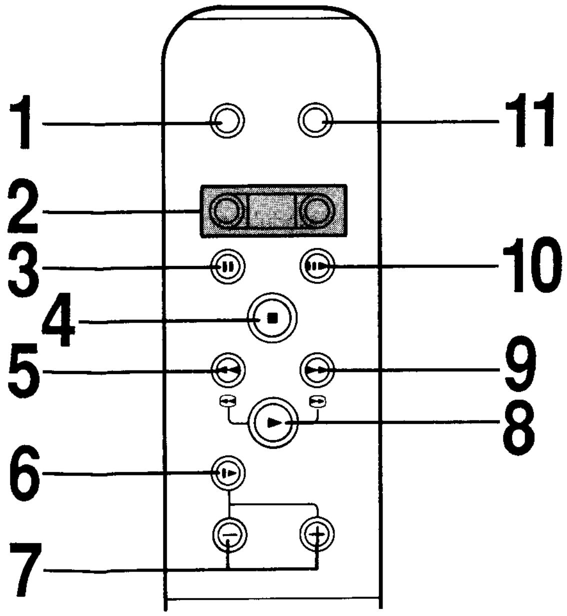
41 AUDIO OUT Sockets

42 V–Lock Controls
If the picture rolls vertically in the Still Playback mode or the Slow Playback mode, adjust with these controls.

Vertical Hold Adjustment
Depending on the TV set used, the picture may shake vertically during Still playback and Slow playback. In this case, adjust the V–Lock Control (on the rear of the VTR) to stop the shaking.
* Depending on the TV set used, it may not be possible to stop the shaking of the picture completely.
* If the TV set is equipped with automatic vertical hold control, set the vertical hold selector of the TV set to the "manual" position, and adjust with manual vertical hold control.



REMOTE CONTROL



1 Operation Button

2 Record Button
To start recording, press both Record Buttons simultaneously.

3 Pause/Still Button

4 Stop Button

5 Rewind Button

6 Slow Button
Press it during playback to change over to Slow playback.

7 +/– Buttons
Use it to change the speed of Slow playback. Pressing the "+" Button increases the Slow playback speed, pressing the "–" Button decreases the Slow playback speed.

8 Play Button

9 Fast Forward Button

10 Still Advance Button
Press it in the Still playback mode to advance the picture frame by frame.
When it is kept pressed, the still pictures will be advanced continuously.

11 Audio Output Selector Button

Converting from one TV system to another

This makes it possible to input NTSC, PAL and SECAM system signals. The input signals of one TV system are converted to another system and can be recorded.
When playing back a tape, the TV system of the recording on the tape is automatically detected and the signals are automatically converted to the selected broadcast system for output to the TV set or another VTR.

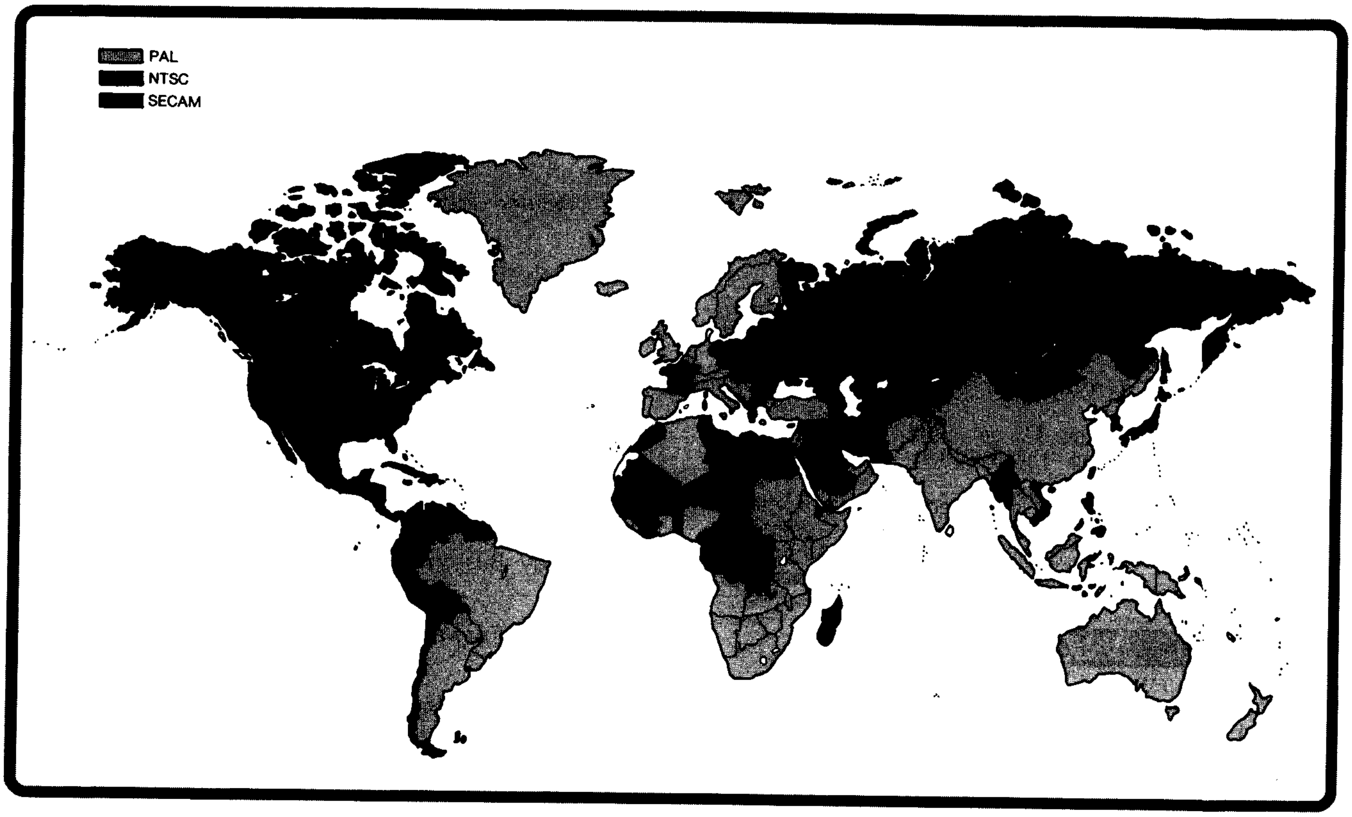
Input Signal
The TV System Switch is used to select the TV system according to the input signal.

Output Signal
The TV Selector Buttons are used to select the TV system according to the desired output signal for playback or recording on another VTR.

Playing Back a Tape
The TV system of the recording on the tape is automatically detected and selected for playback.
* When the TV system cannot be detected, use the playback Tape Selector Switch on the rear panel to select the correct TV system.

COLOUR TV BROADCAST SYSTMES

The Colour TV Broadcast Systems Used in the World



Differences between the Colour TV Broadcast Systems

	SECAM	MESECAM	N-PAL	PAL	M-PAL	3.58 NTSC
Line Frequency	15.625 kHz				15.734 kHz	
Number of Scanning Lines	625 lines				525 lines	
Field Frequency	50 Hz				60 Hz	
Colour Signal Modulation System	FM Conversion System		Suppressed Quadrature Modulation System			
Colour Signal Frequency	4.40625 MHz/4.250 MHz		3.582056 MHz	4.433619 MHz	3.575611 MHz	3.579545 MHz
Burst Signal	I DENT		Inversion by 1H			Phase settled

DISASSEMBLY PROCEDURES

1. DISASSEMBLY FLOW CHART

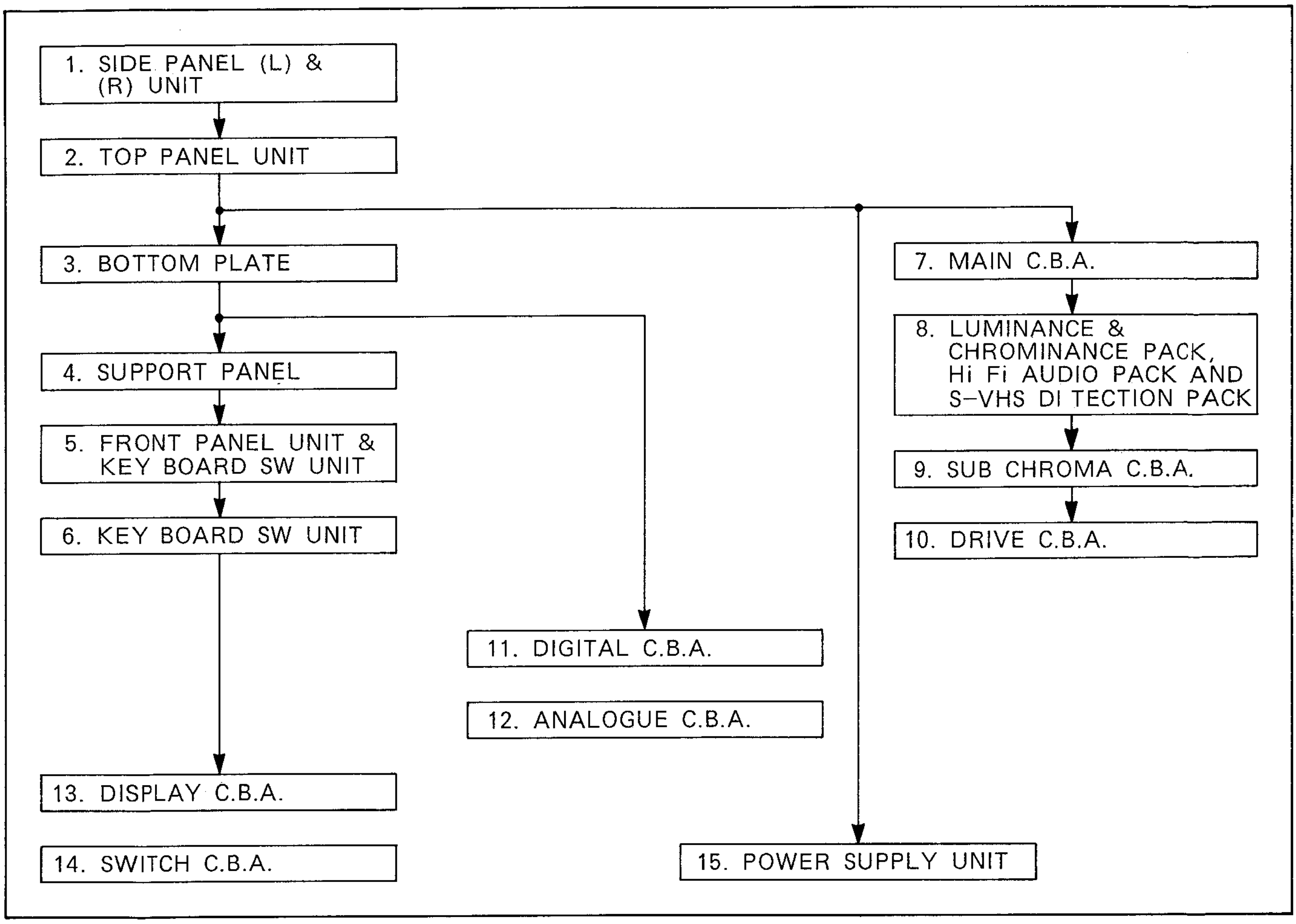

1. SIDE PANEL (L) & (R) UNIT
2. TOP PANEL UNIT
3. BOTTOM PLATE
4. SUPPORT PANEL
5. FRONT PANEL UNIT & KEY BOARD SW UNIT
6. KEY BOARD SW UNIT
7. MAIN C.B.A.
8. LUMINANCE & CHROMINANCE PACK, Hi Fi AUDIO PACK AND S-VHS DETECTION PACK
9. SUB CHROMA C.B.A.
10. DRIVE C.B.A.
11. DIGITAL C.B.A.
12. ANALOGUE C.B.A.
13. DISPLAY C.B.A.
14. SWITCH C.B.A.
15. POWER SUPPLY UNIT

Fig. D1

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.

2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE SIDE PANEL (L) & (R) UNIT

Unscrew ... 4 screws (A).

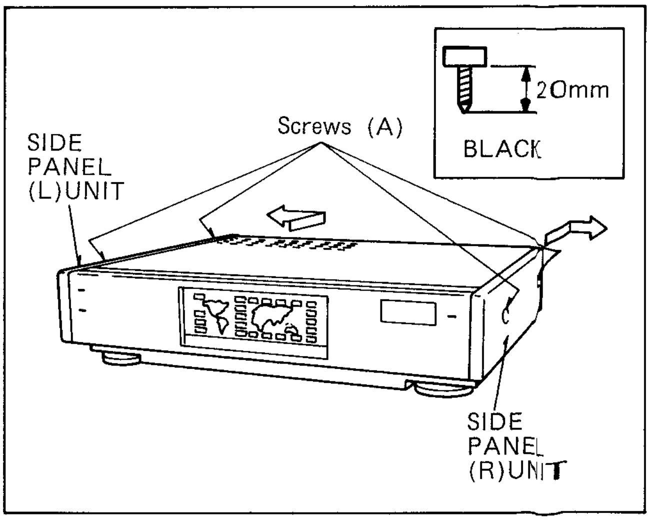

20mm
BLACK
Screws (A)
SIDE PANEL (L)UNIT
SIDE PANEL (R)UNIT

Fig. D2

2. REMOVAL OF THE TOP PANEL UNIT

Unscrew ... 4 screws (B).

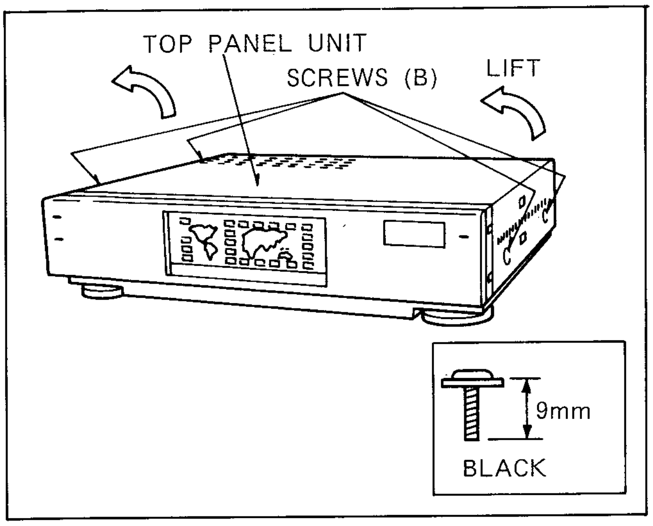

TOP PANEL UNIT
SCREWS (B)
LIFT
9mm
BLACK

Fig. D3

3. REMOVAL OF THE BOTTOM PLATE

Unscrew ... 8 screws (C).

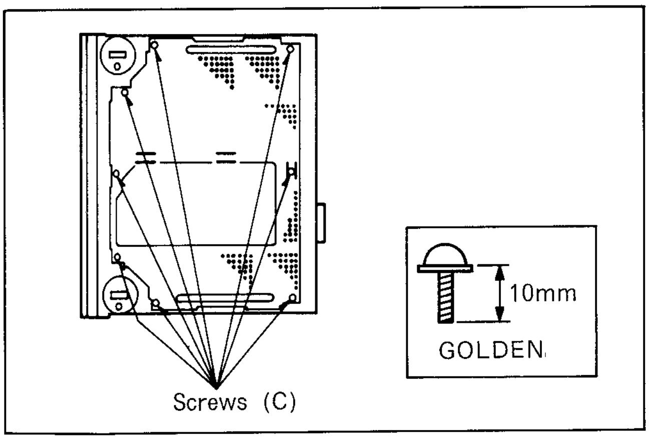

Screws (C)
10mm
GOLDEN

Fig. D4

4. REMOVAL OF THE SUPPORT PANEL

Unlock ... 3 tabs (D).

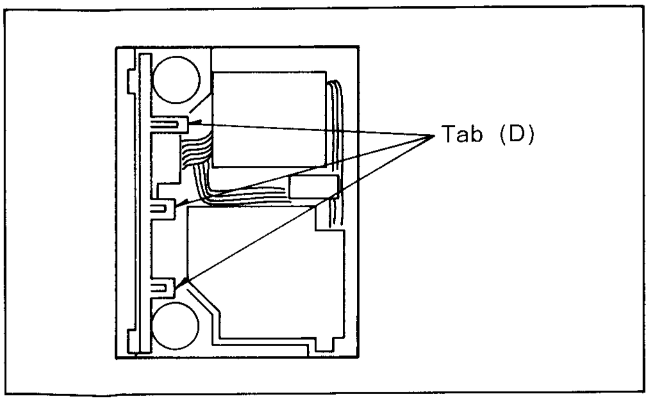


Fig. D5

5. REMOVAL OF THE FRONT PANEL UNIT & KEY BOARD SW UNIT

Unscrew ...... 1 screw (E) and 2 screws (F).
Unlock .... 5 tabs (G).
Disconnect ... Connector (P1571).

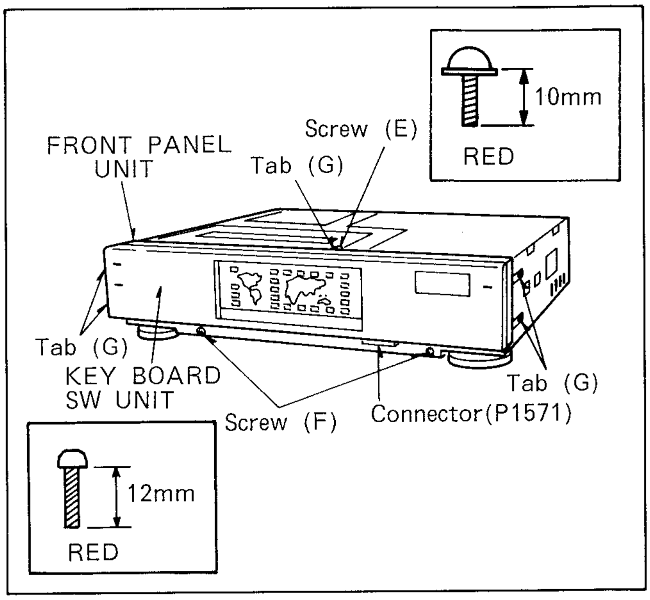

10mm
RED
Screw (E)
FRONT PANEL UNIT
Tab (G)
Tab (G)
KEY BOARD SW UNIT
Screw (F)
Connector(P1571)
Tab (G)
12mm
RED

Fig. D6

6. REMOVAL OF KEY BOARD SW UNIT

Unscrew ... 2 screws (H).

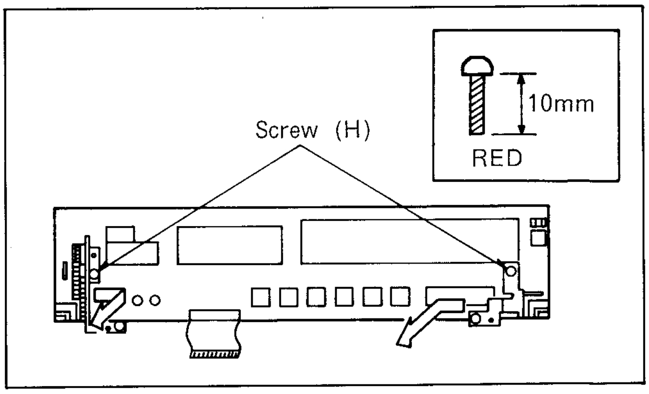
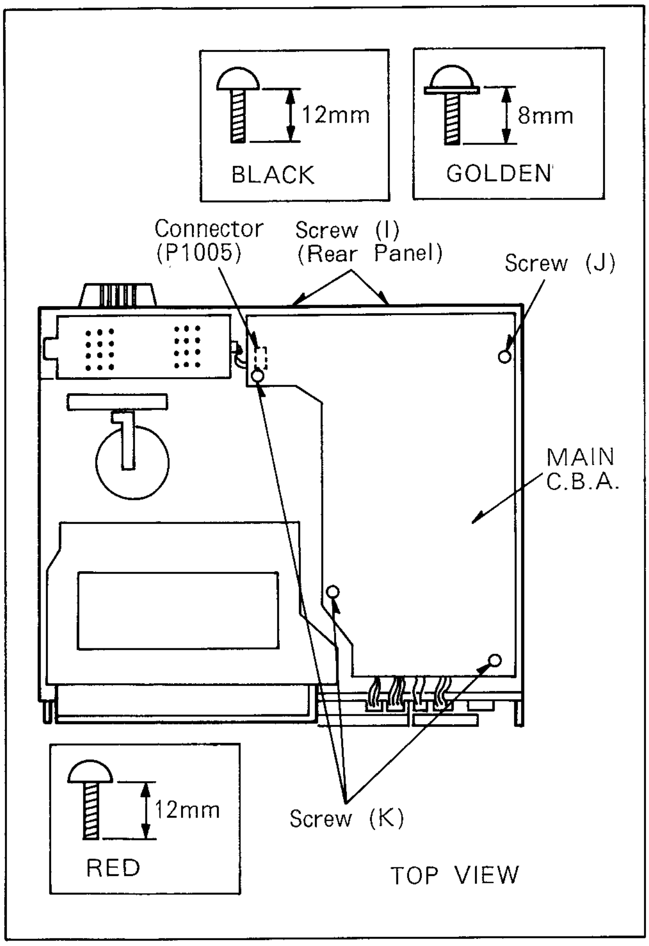

Screw (H)
10mm
RED

Fig. D7

7. REMOVAL OF MAIN C.B.A.

Unscrew ...... 2 screws(I), Screw(J), 3 screw(K).
Disconnect ... Connector (P1005).



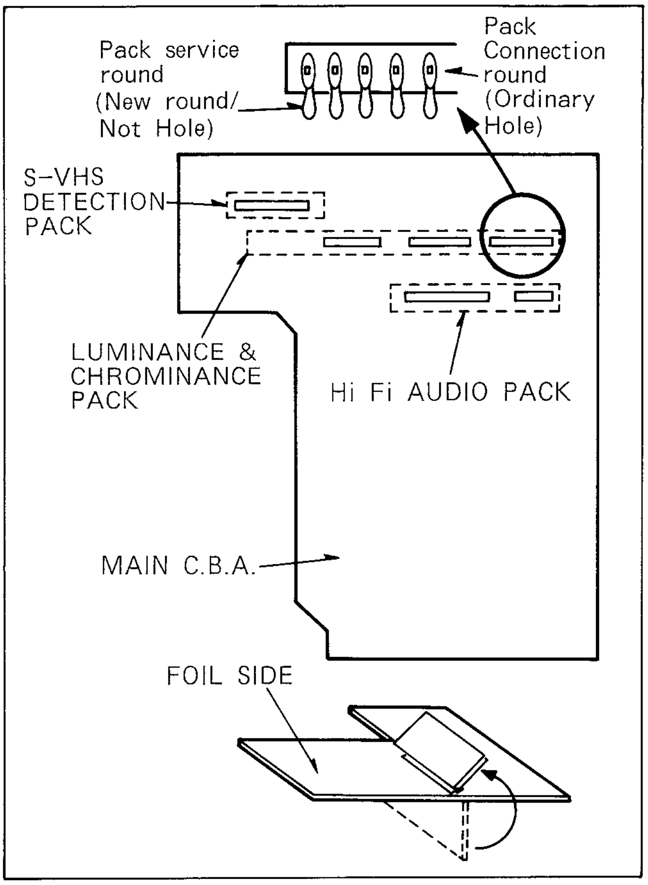
12mm
BLACK
8mm
GOLDEN
Connector (P1005)
Screw (I) (Rear Panel)
Screw (J)
MAIN C.B.A.
12mm
RED
Screw (K)
TOP VIEW

Fig. D8

8. SERVICING OF LUMINANCE & CHROMINANCE PACK, Hi Fi AUDIO PACK AND S-VHS DETECTION PACK C.B.A.

Pack service rounds have added on foil side of Main C.B.A. There are located on next to pack connection rounds for Luminance & Chrominance pack, Hi Fi Audio pack and S-VHS Detection pack.

1. Remove the pack which is checked for servicing.
2. Put on the pack pins to service round and soldering to hold them.

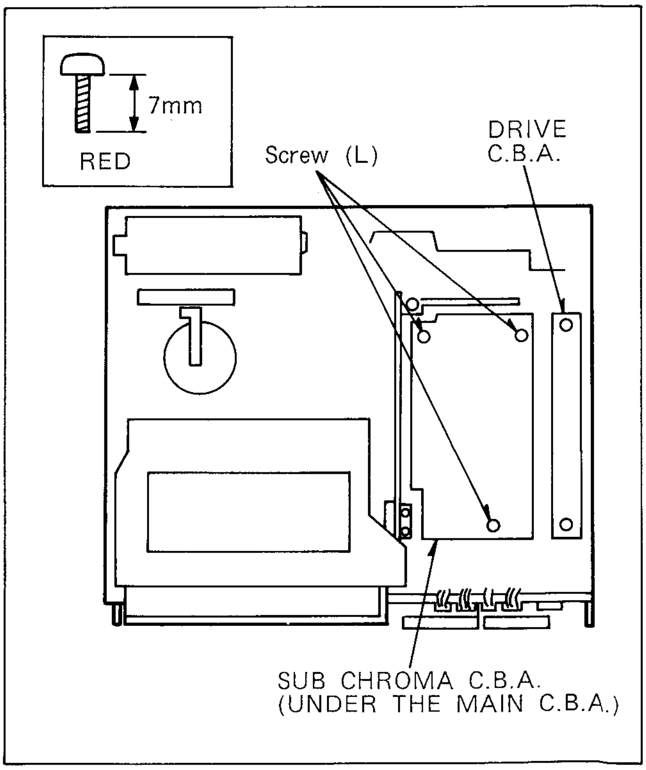


Pack service round (New round/ Not Hole)
Pack Connection round (Ordinary Hole)
S-VHS DETECTION PACK
LUMINANCE & CHROMINANCE PACK
Hi Fi AUDIO PACK
MAIN C.B.A.
FOIL SIDE

Fig. D9

9. REMOVAL OF SUB CHROMA C.B.A.

Unscrew ... 3 screws (L).

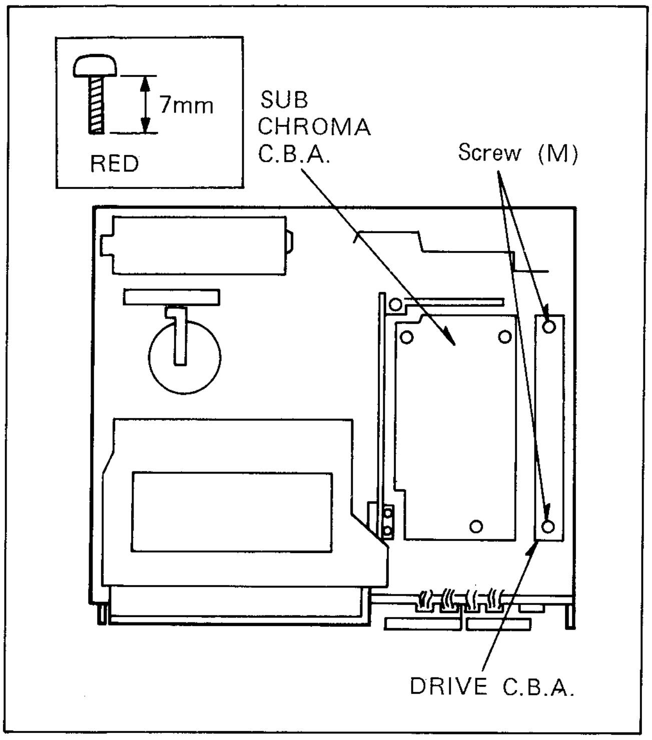


7mm
RED
Screw (L)
DRIVE C.B.A.
SUB CHROMA C.B.A. (UNDER THE MAIN C.B.A.)

Fig. D10

10. REMOVAL OF DRIVE C.B.A.

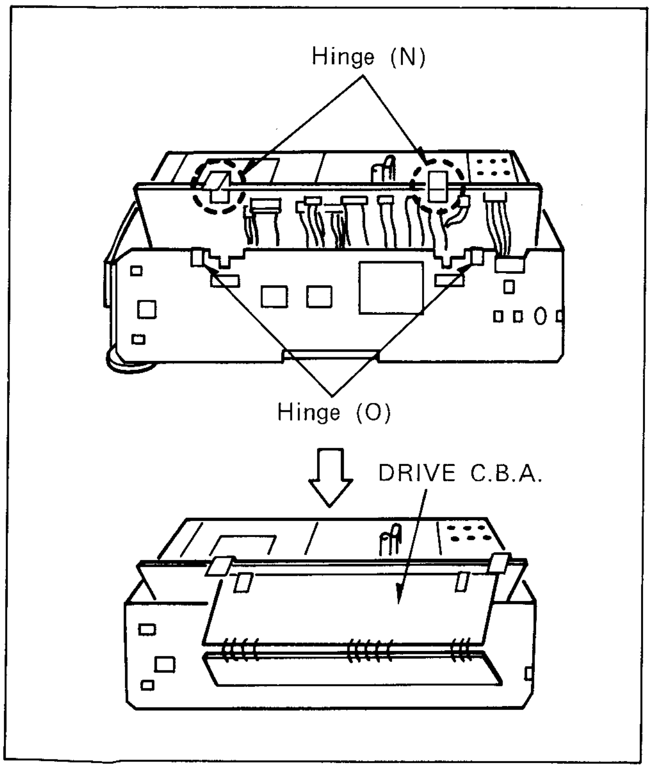
Unscrew ... 2 screws (M).



7mm
RED
SUB CHROMA C.B.A.
Screw (M)
DRIVE C.B.A.

Fig. D11

Unlock ... 2 hinges (N) for lift up the Main C.B.A.
Unlock ... 2 hinges (O) for lift up the Drive C.B.A.

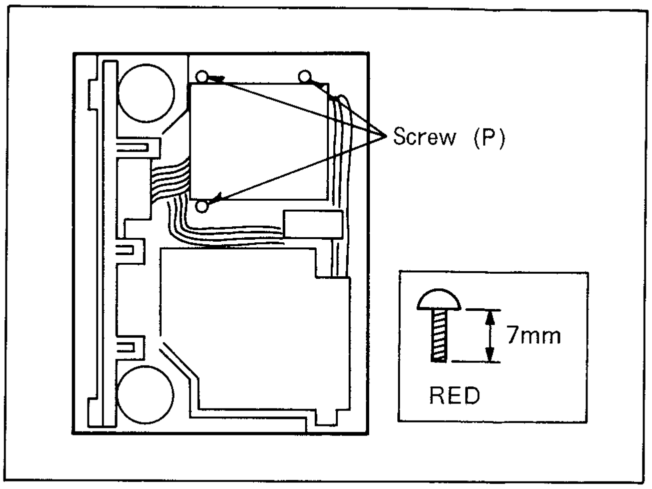


Hinge (N)
Hinge (O)
DRIVE C.B.A.

Fig. D12

11. REMOVAL OF DIGITAL C.B.A.

Unscrew ... 3 screws (P).
Remove .... Shield cover (TOP/BOTTOM).

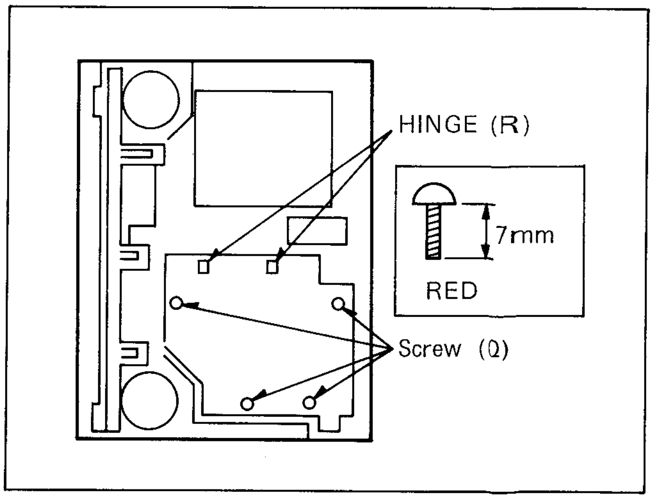


Screw (P)
7mm
RED

Fig. D13

12. REMOVAL OF ANALOGUE C.B.A.

Unscrew ... 4 screws (Q).
Unlock .... 2 hinges (R) (Not necessary for checking).



HINGE (R)
7mm
RED
Screw (Q)

Fig. D14

13. REMOVAL OF DISPLAY C.B.A.

Unscrew ...... 3 screws (S).
Disconnect ... 4 Connectors (P7501, P7503, P7504 and P7507).

* Front jack C.B.A. can remove from Display C.B.A. by unlock 2 locking tabs and then disconnect P4801 and earth lead.

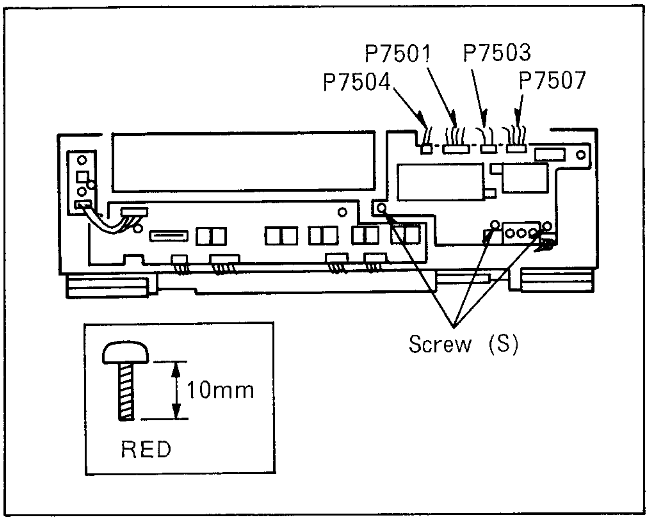

P7501
P7503
P7504
P7507
Screw (S)
10mm
RED

Fig. D15

14. REMOVAL OF SWITCH C.B.A.

Unscrew ...... 3 screws (T).
Disconnect ... 4 connectors (P6801, P6802, P6803, P6804).

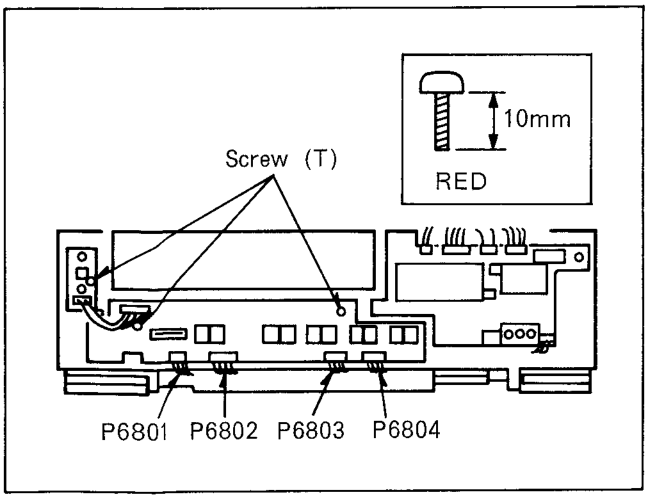

10mm
RED
Screw (T)
P6801
P6802
P6803
P6804

Fig. DI6

15. REMOVAL OF POWER SUPPLY UNIT

Unscrew ... 2 screws (U), Screw (V).
Un lock ... 2 tabs (W).
Remove .... Heart sink cover.

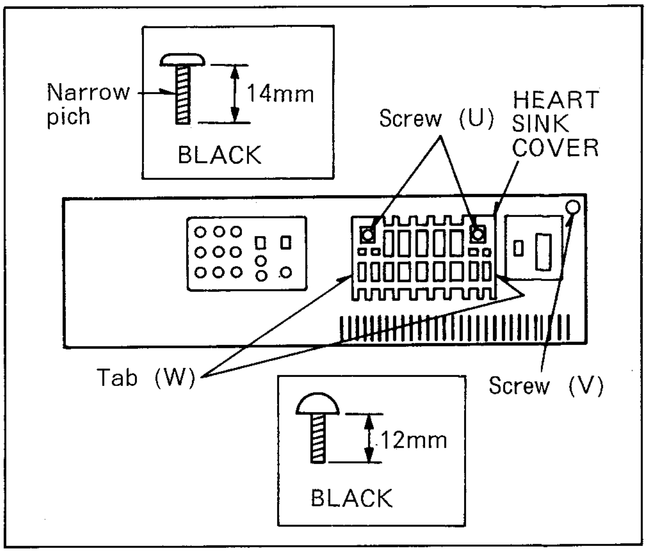

Narrow pich
14mm
BLACK
Screw (U)
HEART SINK COVER
Tab (W)
Screw (V)
12mm
BLACK

Fig. D17

Unscrew ... Screw (X).
Remove .... Heart sink.

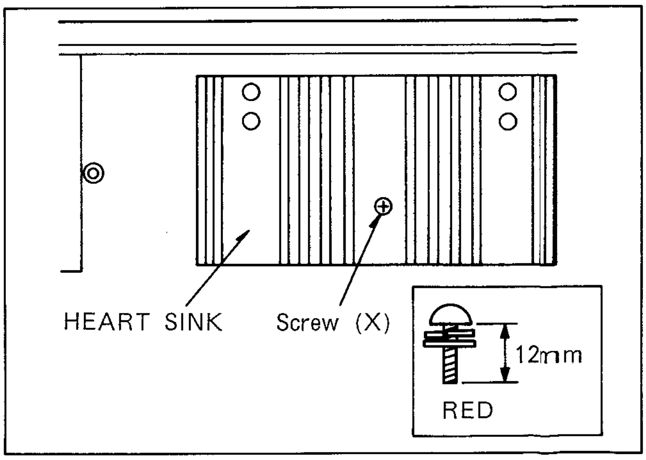

HEART SINK
Screw (X)
12mm
RED

Fig. D18

Unscrew ... 3 screws (Y).

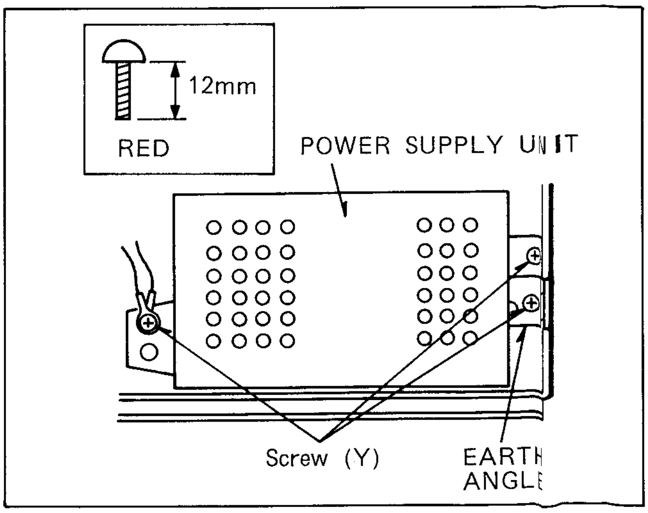

12mm
RED
POWER SUPPLY UNIT
Screw (Y)
EARTH
ANGLE

Fig. D19

MECHANICAL ADJUSTMENT PROCEDURES

1. HOW TO EJECT MANUALLY

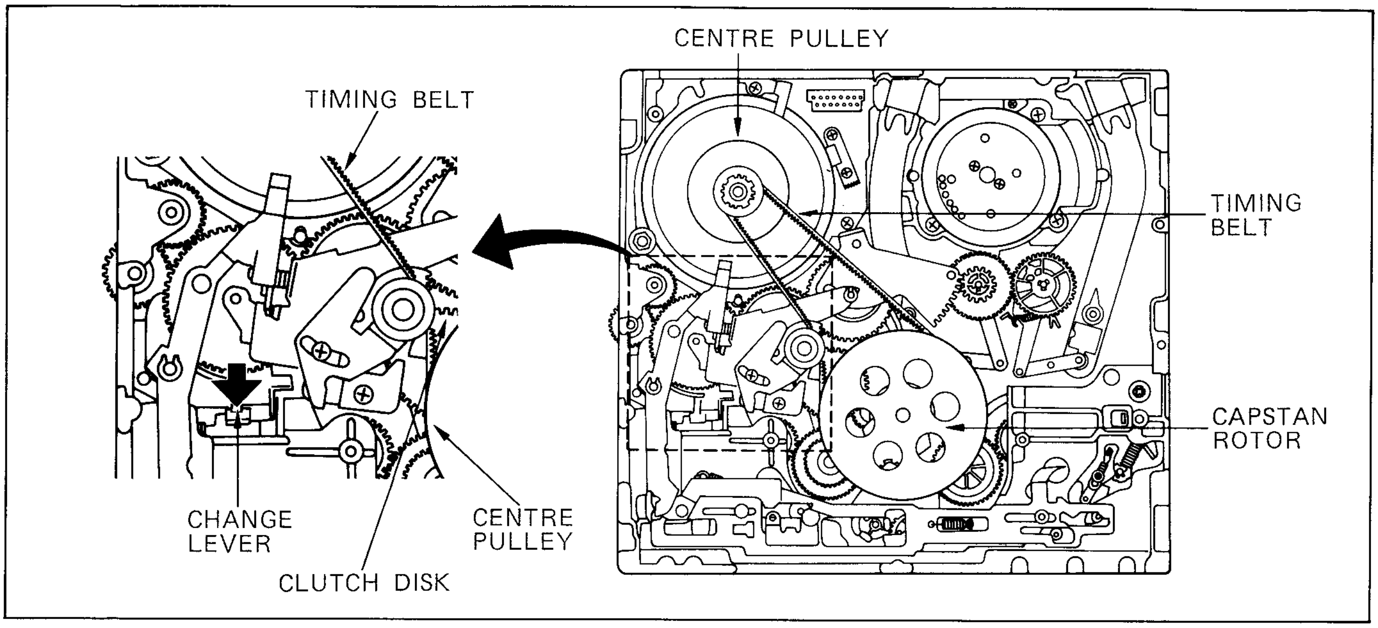

CENTRE PULLEY
TIMING BELT
TIMING BELT
CAPSTAN ROTOR
CHANGE LEVER
CENTRE PULLEY
CLUTCH DISK

Fig. M1 How to Eject Manually

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to eject manually as follows.

1. Take out the main AC.
2. Release the Change Lever by pushing it to arrow mark direction as shown in Fig. S1.
3. Turn the Capstan Motor to counter clockwise slowly until the Clutch Disk is locked.
   (Clutch Disk is locked once in one rotation.)
4. Release the Change Lever again when the Clutch Disk is locked.
5. Repeat the item 2 and the item 3 until cassette is ejected.

2. REMOVAL OF THE CASSETTE COMPARTMENT

2–1 Unscrew 2 screws (Y) and slide the cassette holder until appearing 2 screws (Z) by turning (clockwize) the Capstan Rotor Unit and then unscrew 2 screws (Z).

2–2 Remove the flexible wire from connector P1503 on the photo Tr. (T) C.B.A., then carefully pull out the Cassette Compartment.

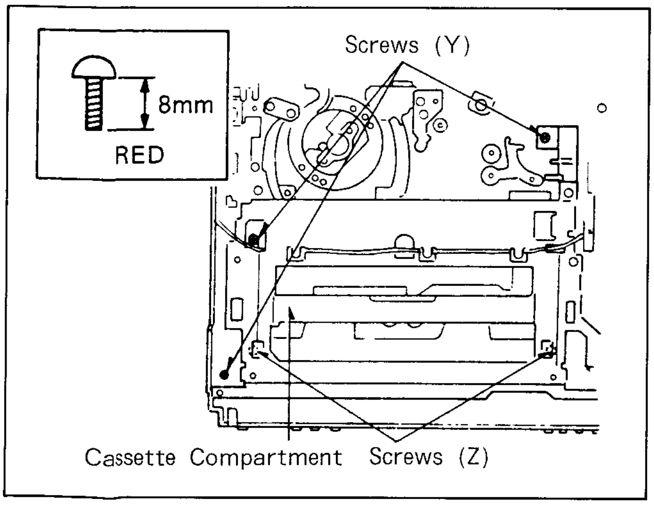

8mm
RED
Screws (Y)
Cassette Compartment
Screws (Z)

Fig. M2

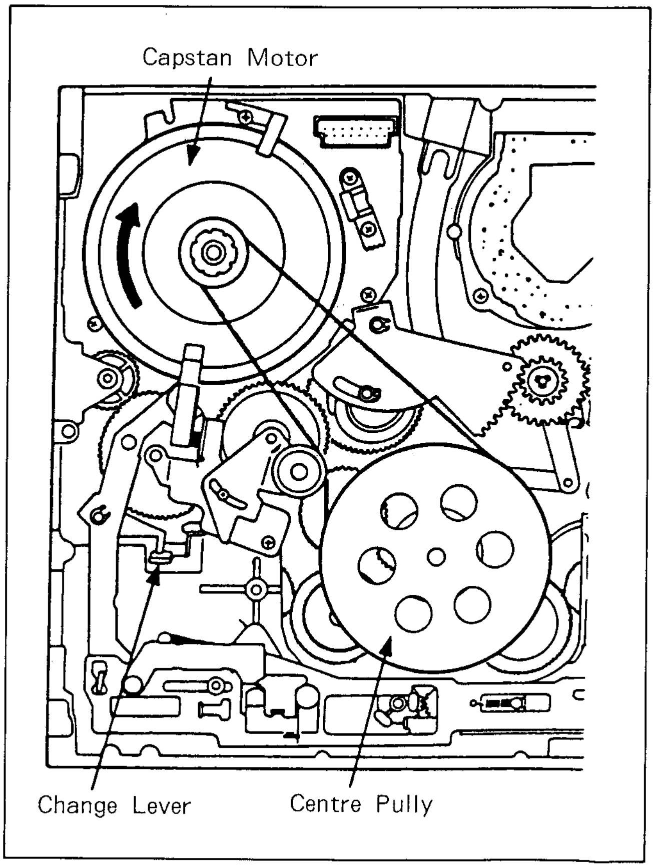

Capstan Motor
Change Lever
Centre Pully

Fig.M3

3. HOW TO SEE THE MOVEMENT OF MECHANISM WITHOUT CASSETTE COMPARTMENT

Since capstan motor works as loading motor and front loading motor, phase relationship between cassette compartment and mechanism is important, so playback and FF/REW can not be performed even just only taking out the cassette compartment, however if you want to see the mechanical movement without cassette compartment, it is possible as follows.

1. Take out the main AC.
2. Take out the flat cable from connector on the cassette compartment and remove the cassette compartment from chassis.
   Set the mechanism to STOP mode as following items 3, 4, 5, 6.
3. Release the Change Lever by pushing it to arrow mark direction as shown in Fig. M1.
4. Turn the Capstan Motor to clockwise until the Clutch Disk is locked.
   (Clutch Disk is locked once in one rotation.)
5. Release the Change Lever again when Clutch Disk is locked.
6. Repeat item 4 and 5 until mechanism come to STOP position as shown in Fig. M4.
7. Turn the power on.
8. Now, any operation can be performed without cassette compartment.

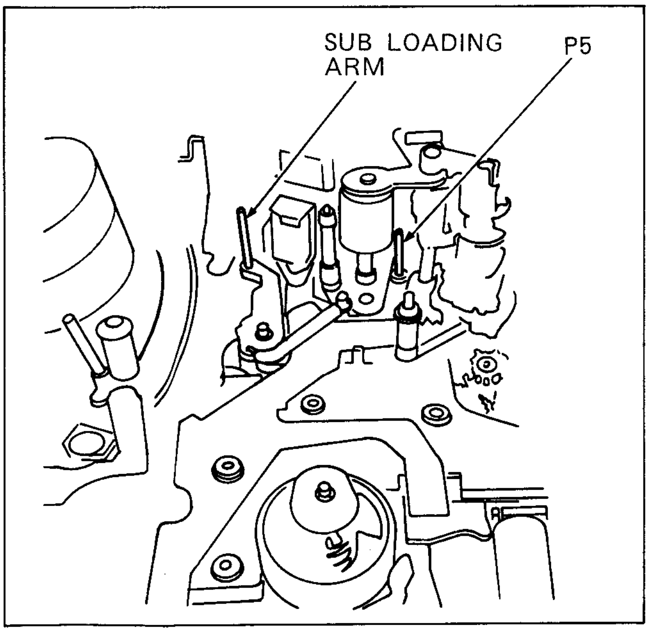


Fig. M4 STOP Condition

* Note. 1
Do not add the large torque to any gears not break it.

* Note. 2
When reinstalling the cassette compartment, refer "Reinstallation of Cassette Compartment."

* Note. 3
Even though cassette switch is not connected to microprocessor, unit can work correctly.

4. MECHANICAL ADJUSTMENT PROCEDURES

4–1. TENSION ADJUSTMENT OF TIMING BELT FOR CAPSTAN MOTOR

(Equipment Required)
Fan Type Tension Gauge (VFK62)

(Specification) 40 +– 5g

1. Loosen a screw (A) slightly by using the screwdriver.
2. Set the Fan Type Tension Gauge to the direction indicated by the arrow (B) as shown in Fig. M5.
3. Tighten a screw (A) when the reading of the Fan Type Tension Gauge becomes 40 +– 5g.

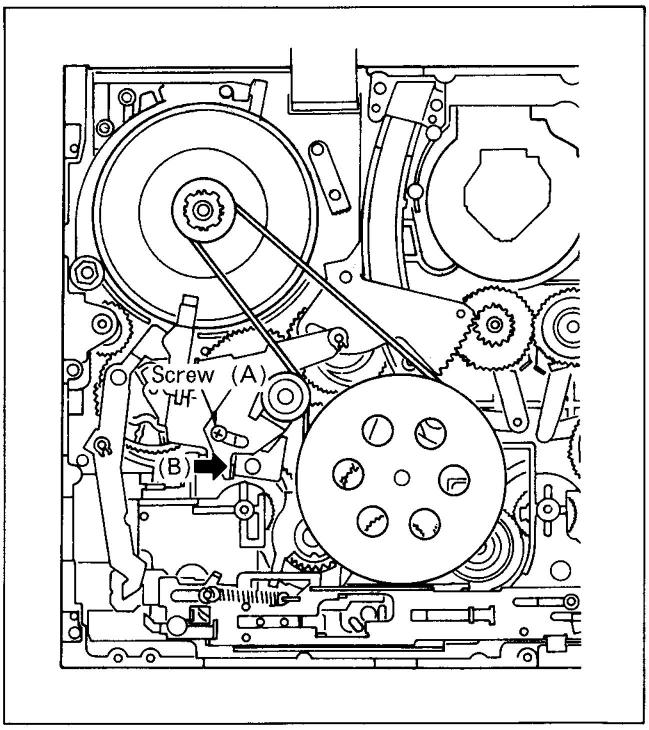


Fig. M5

4–2. POSITION ADJUSTMENT OF TENSION POST

(Equipment Required)
Tension Post Adjustment Plate (VFK0387)
Hex. Wrench : 2mm (Hex Wrench Set : VFK0326)

1. Disconnect the AC plug.
2. Remove the cassette compartment and disconnect the flat cable from P1508.
3. Turn the Capstan Motor to the clockwise while the change lever is being pushed until the loading is completed as shown in Fig. M6.

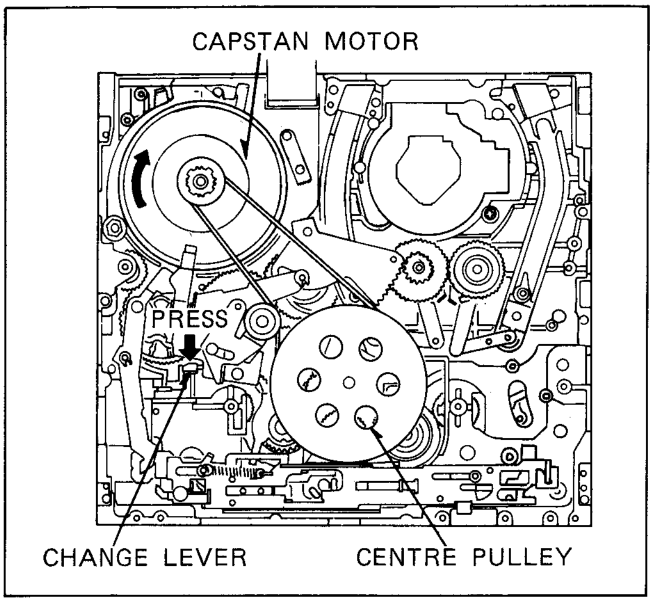

CAPSTAN MOTOR
PRESS
CHANGE LEVER
CENTRE PULLEY

Fig. M6

4. Place the Adjustment Plate and insert the hex wrench into the hole of Tension Band Fastener as shown in Fig. M7.
5. Adjust the hole of Tension Band Fastener by using the hex wrench so that the Tension Post just touches the fixture of Adjustment Plate.
6. After the Adjustment, turn the Capstan Motor until the unloading is completed.

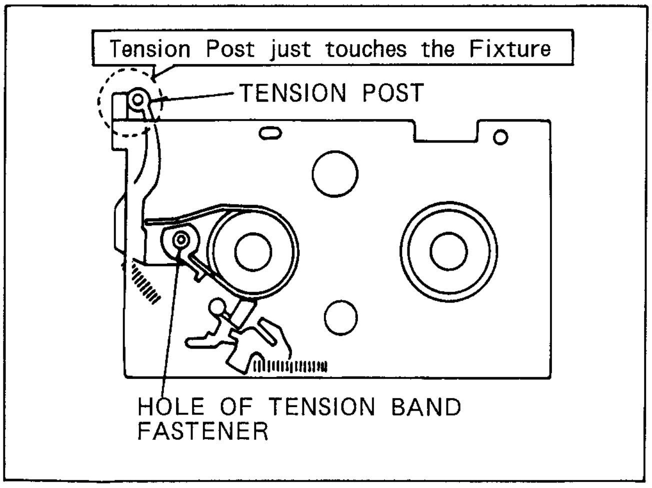

Tension Post just touches the Fixture
TENSION POST
HOLE OF TENSION BAND FASTENER

Fig. M7

4–3. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

(Equipment Required)
Back Tension Meter (Tentelometer or VFK0132)
VHS Cassette Tape (180 minutes tape)

(Specification) 22.5–27.5g

1. Playback the cassette tape from the beginning and wait until the tape movement get the stabilization. (for approx. 10~20 seconds)
2. Insert the Back Tension Meter into the path of a tape, and measure the back tension to be within specification as shown in Fig. M8.

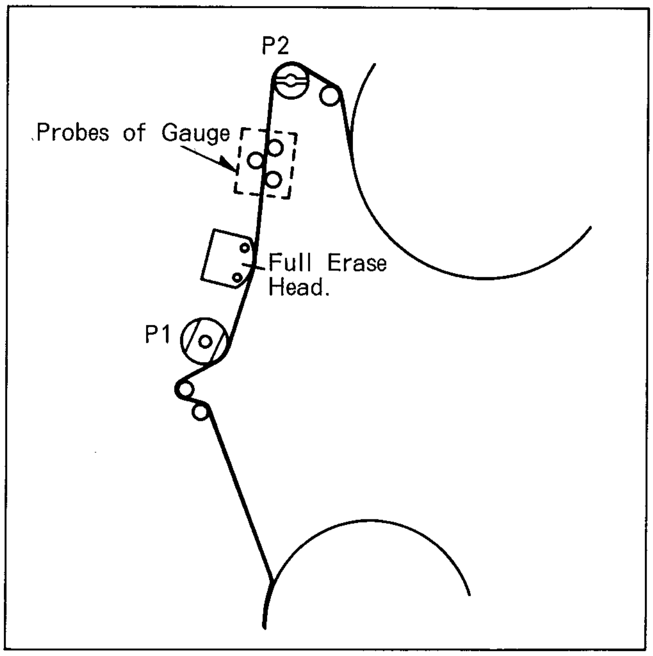

P2
Probes of Gauge
Full Erase Head.
P1

Fig. M8 Measurement of Back Tension

Note:
1. While measuring, make sure that the three probes of the meter are all in good contact with the tape.
2. As the tension meter is very sensitive, we recommend taking 3 separate readings.
3. If it is out of specification, change the spring notch as shown in Fig. M9.

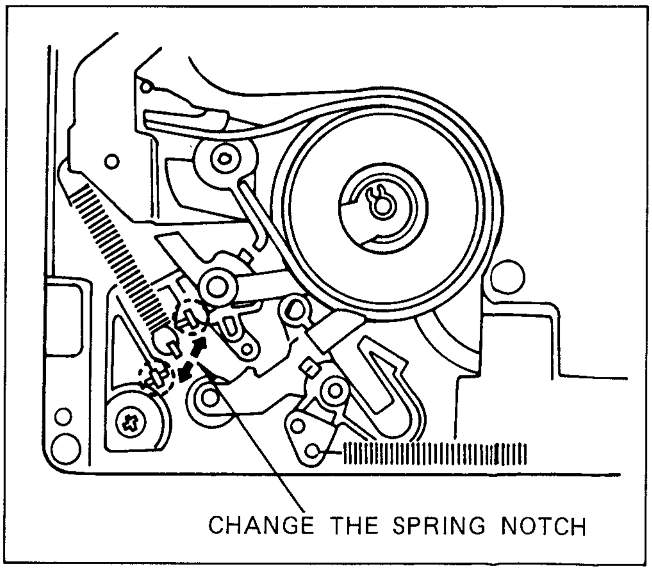

CHANGE THE SPRING NOTCH

Fig. M9

4-4. HEIGHT ADJUSTMENT OF THE REEL TABLES

(Equipment Required)
Post Adjustment Plate (VFK0191)
Reel Table Height Gauge (VFK0190)

(Specification) 0~0.2mm

1. Remove the cassette compartment.
2. Place the Post Adjustment Plate on the reel tables.
3. Place the Reel Table Height Gauge on the plate so that the scraper of the gauge touches the cut-out portion of the plate, then set the gauge to zero "0" as shown in Fig. M10.

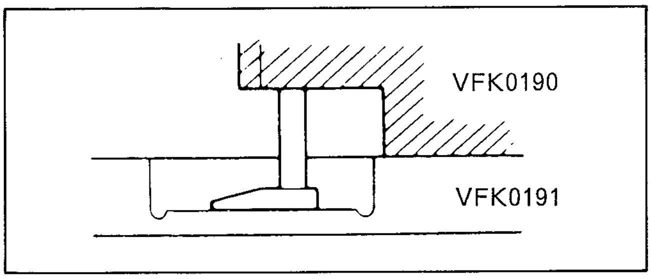


Fig. M10 Adjustment of Reel Table Height-(1)

4. Measure the meter indication of top surface of reel table as shown in Fig. M11. And then perform the same measurement and confirmation for the other reel table.

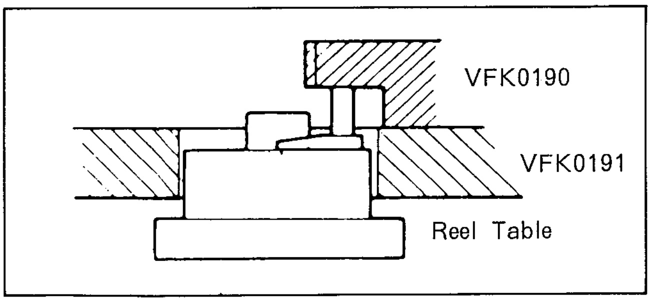


Fig. M11 Adjustment of Reel Table Height-(2)

5. If the difference is more than 0.2mm higher or lower, replace the poly-slider washer located under the reel table with one of the appropriate thickness. Reel washers are available in thickness of 0.2mm, 0.3mm and 0.5mm.

Washer Thickness	Part No.
0.2mm	VMX1238
0.3mm	VMX1239
0.5mm	VMX1171

Fig. M12

4-5. ADJUSTMENT OF THE CAPSTAN THRUST GAP

(Equipment Required)
Reel Table Height Gauge (VFK0190)
Height Adjustment Jig (VFK0344)

(Specification) 0.5~0.55mm

1. Turn a Thrust Adjust Screw slightly until the capstan rotor unit just touches the coil of the capstan stator unit.

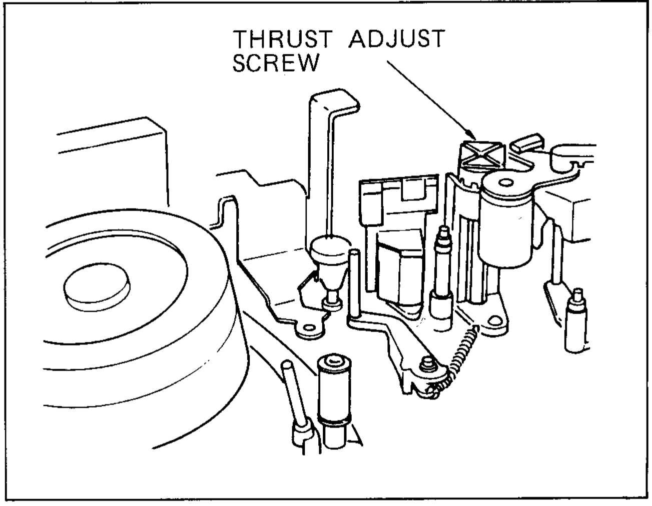


Fig. M13

2. Set the height adjustment Jig on the capstan Rotor unit.
3. Place the height gauge on the bottom case unit and set the height gauge to zero "0".

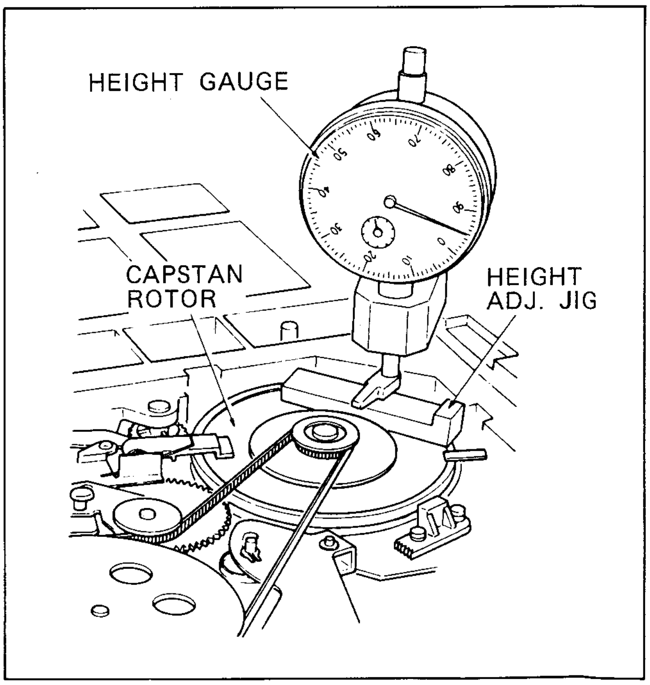


Fig. M14

4. Adjust a Thrust Adjust Screw so that the thrust gap becomes 0.5∼0.55mm.

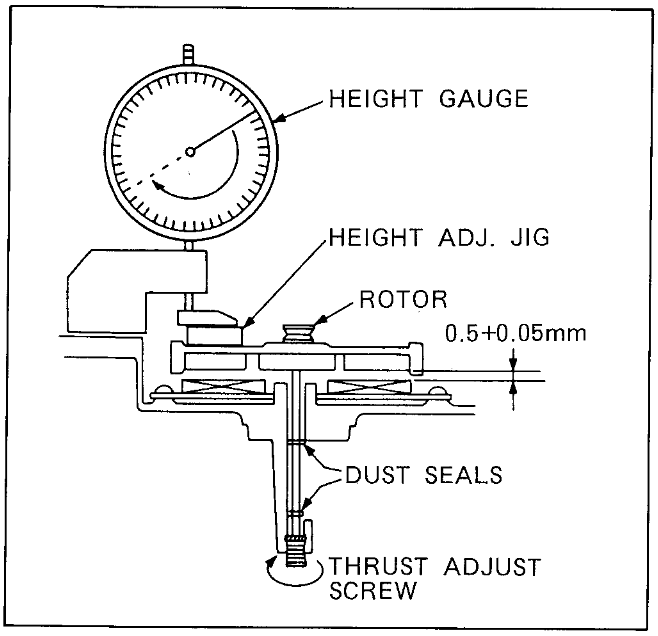

HEIGHT GAUGE
HEIGHT ADJ. JIG
ROTOR
0.5+0.05mm
DUST SEALS
THRUST ADJUST SCREW

Fig. M15

4–6. HEIGHT ADJUSTMENT OF TAPE GUIDE POST (P2 AND P3)

(Equipment Required)
Post Adjustment Plate (VFK0191)
Reel Table Height Gauge (VFK0190)
Post Adjustment Screwdriver (VFK0329)

1. Remove the cassette compartment.
2. Place the Post Adjustment Plate over the reel tables.
   Confirm that the Post Adjustment Plate is firmly seated as shown in Fig. M16.

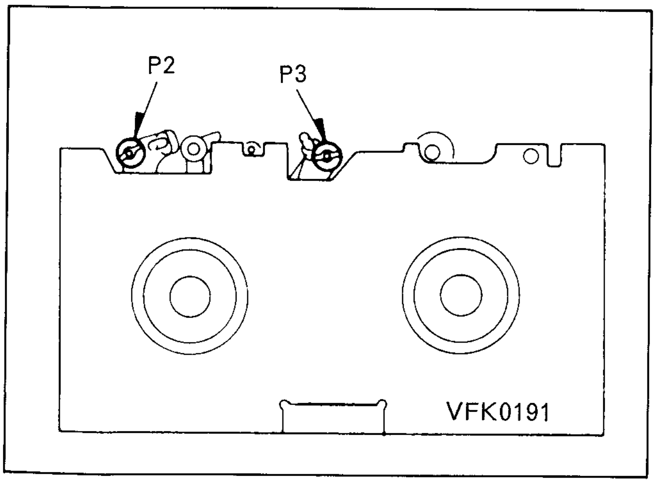
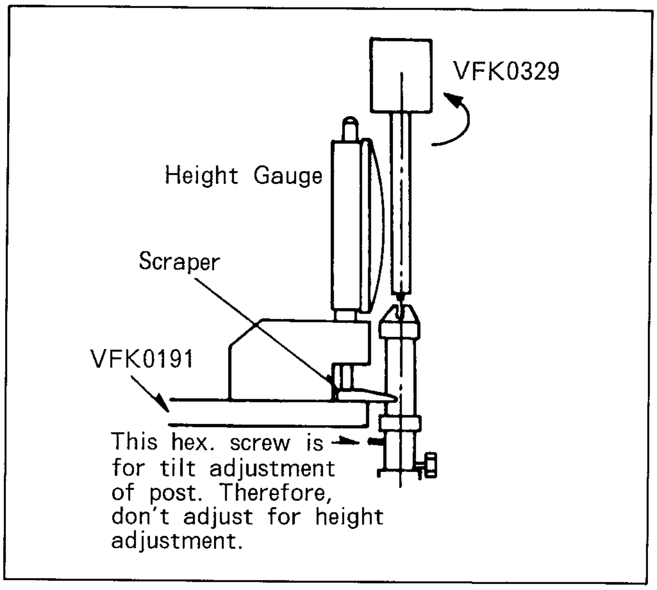

P2
P3
VFK0191

Fig. M16

3. Lower 2 tape guide posts (P2 and P3) by turning the Post Adjustment screwdriver so that the condition of height becomes as shown in Fig. M17. That is, the lower edge of Tape guide should be lower than surface of Adjustment Plate.


VFK0329
Height Gauge
Scraper
VFK0191

This hex. screw is for tilt adjustment of post. Therefore, don't adjust for height adjustment.

Fig. M17

4. Place the scraper of Reel Table Height Gauge as shown in Fig. M18.
   Set the gauge to zero, then raise the post slowly until the lower tape guide just touches the bottom of the scraper. Use the gauge to determine the exact point at which the lower tape guide touches the scraper.

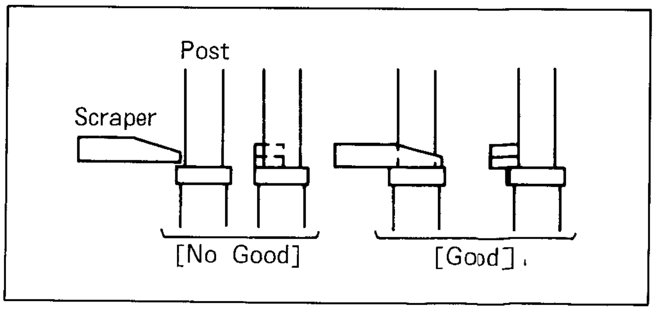

Post
Scraper
[No Good]
[Good]

Fig. M18

4–7. HEIGHT ADJUSTMENT OF THE PULL–OUT POST (P5 POST)

(Equipment Required)
Post Adjustment Plate (VFK0191)
Reel Table Height Gauge (VFK0190)
Nut Driver (Purchase locally)

(Specification) −0.06+−0.01mm

Note:
Unless the replacement or adjustment of this post is required, the adjustment nut should not be turned.

1. Remove the cassette compartment.
2. Place the Post Adjustment Plate over the reel tables.
3. Turn the Capstan Motor to counterclockwise (loading direction) until the mechanical condition becomes as shown in Fig. M19.

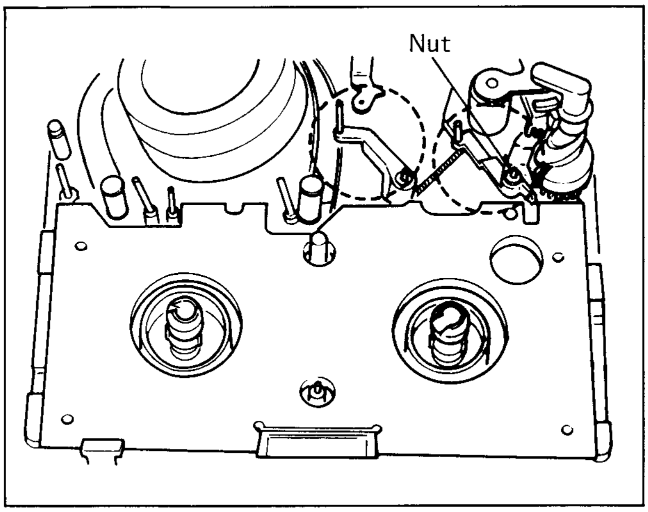


Fig. M19

4. Place the Reel Table Height Gauge on the Post Adjustment Plate and set the gauge to zero "0" as shown in Fig. M20.

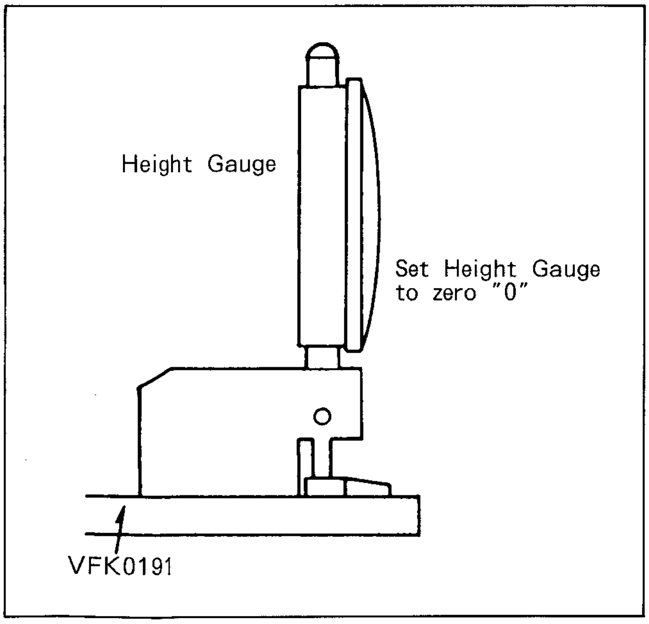

Height Gauge
Set Height Gauge to zero "0"
VFK0191

Fig. M20

5. Place the Reel Table Height Gauge as shown in Fig. M21 and turn the nut slowly until the gauge reads −0.06+−0.01mm.

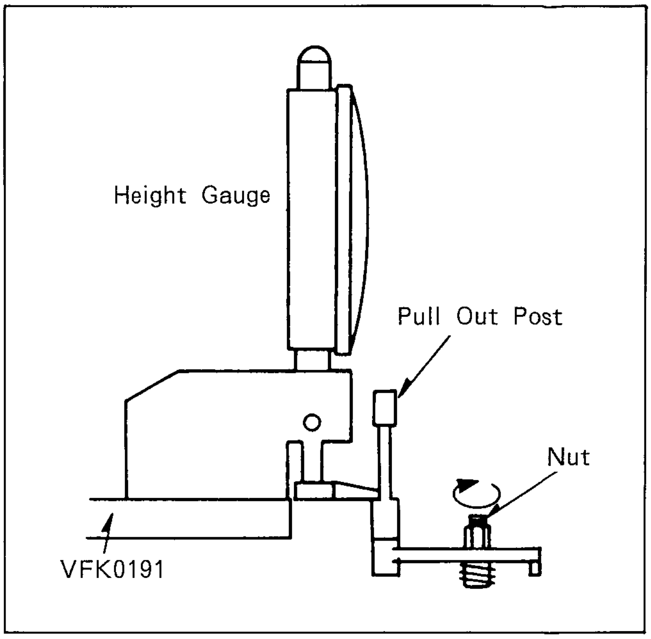

Height Gauge
Pull Out Post
Nut
VFK0191

Fig. M21

6. After the adjustment, install the cassette compartment.
7. Play back a normal cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the posts P1, P2, P3, P4 and pull out post as shown in Fig. M22.

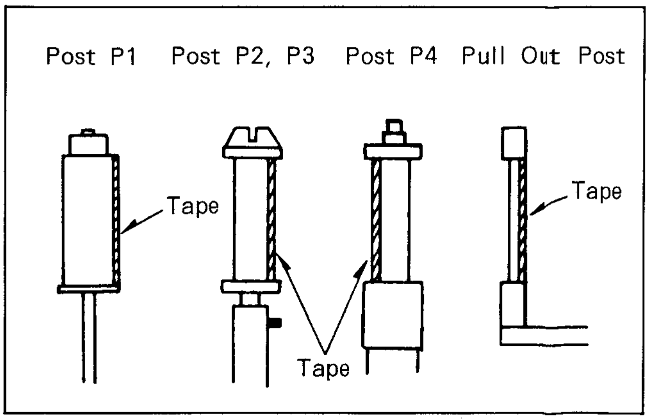

Post P1
Post P2, P3
Post P4
Pull Out Post
Tape
Tape
Tape

Fig. M22

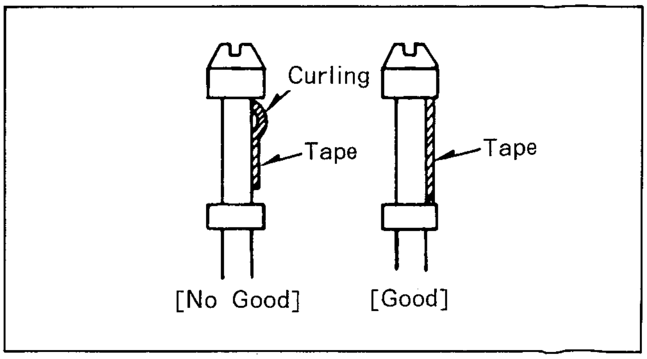

Curling
Tape
Tape
[No Good]
[Good]

Fig. M23

8. If curling appears, readjusts each post (except P1, P4).

4-8. TAPE INTERCHANGEABILITY ADJUSTMENT

Note:
Proceed the following procedures for Tape Interchangeability Adjustment to do it Correctly and Smoothly.

A. Confirmation and Adjustment of P2 and P3 Posts.
B. Tilt Adjustment of A/C Head.
C. Height Adjustment of A/C Head.
D. Azimuth Adjustment of A/C Head.
E. Horizontal Position of A/C Head.

If the Tape Interchangeability Adjustment is not perfect, repeat the above procedures from A to E.

A. Confirmation and Adjustment of P2 and P3 Posts

(Equipment Required)
Alignment Tape (PAL Alignment Tape)
Post Adjustment Screwdriver
(VFK0329)

1. Connect the oscilloscope to the output of the Head Amp as shown in Fig. M24.

Note:
To get a stable waveform of the Head Amp output on the oscilloscope, use the head switching pulse as a triggering signal as shown in Fig. M24.

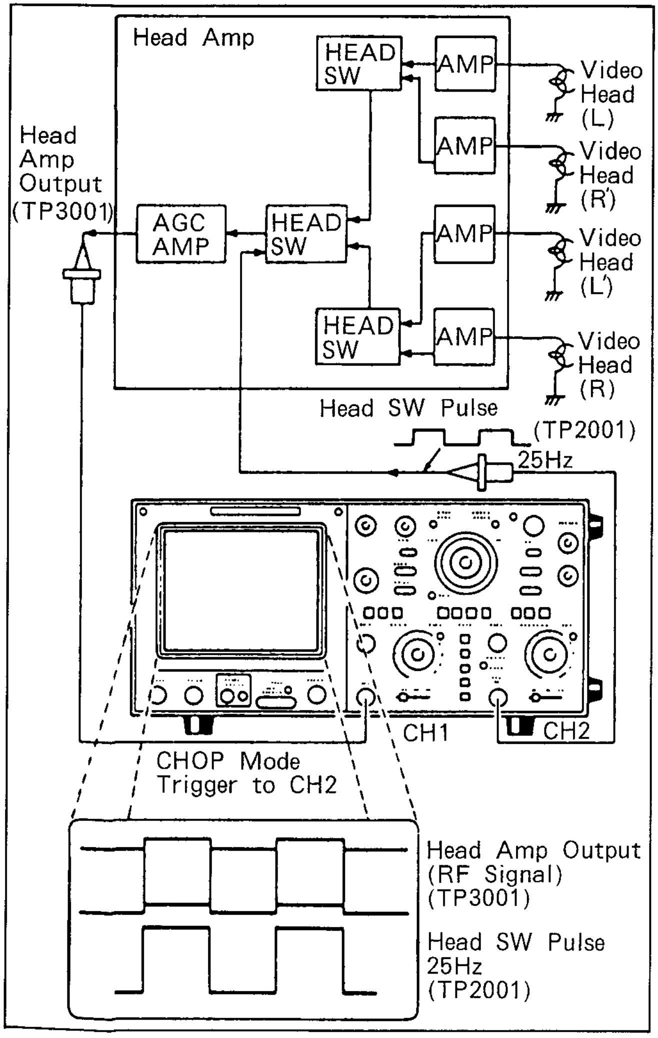

Head Amp
HEAD SW
AMP
Video Head (L)
AMP
Video Head (R')
Head Amp Output (TP3001)
AGC AMP
HEAD SW
AMP
Video Head (L')
HEAD SW
AMP
Video Head (R)
Head SW Pulse
(TP2001)
25Hz
CH1
CH2
CHOP Mode
Trigger to CH2
Head Amp Output (RF Signal) (TP3001)
Head SW Pulse 25Hz (TP2001)

Fig. M24 Connection of Oscilloscope

2. Play back the PAL alignment tape and set the Tracking Fix position.
3. If the RF envelope appears like example "A" or "B" in Fig. M25 then adjustment of the tape guide post (P2 : Entrance) is necessary.
4. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig. M25–"C".

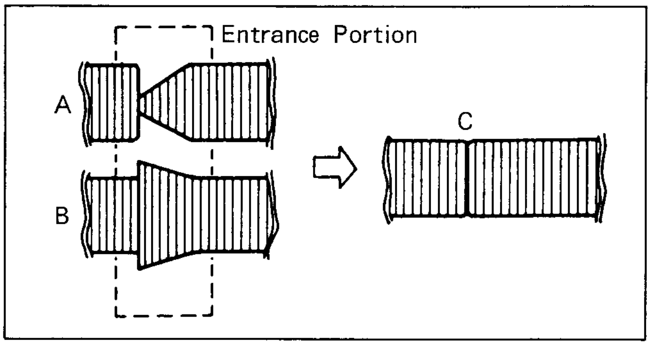

Entrance Portion
A
B
C

Fig. M25

5. If the RF envelope appears like example "D" or "E" in Fig. M26, then adjustment of the tape guide post (P3 : Exit) is necessary.
6. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Fig. M26–"F".

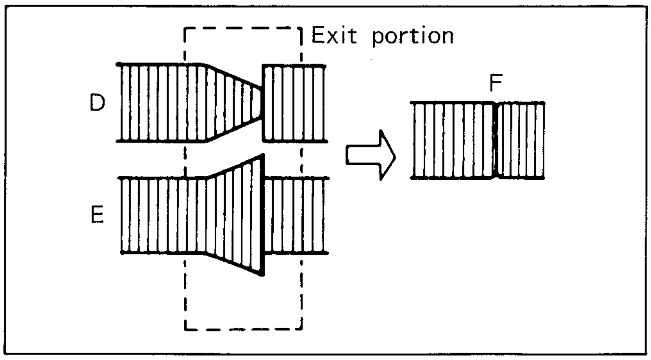

Exit portion
D
E
F

Fig. M26

7. Turn the Tracking VR fully clockwise and counter clockwise (Keep pressing + button or − button) The output envelope should vary nearly parallel with other condition as shown in Fig. M27.
8. Set the tracking control into centre fix position and adjust for maximum RF envelope.
If the RF envelope does not meet these specifications,
V1/V>=0.7 V2/V>=0.8 (Refer to Fig. M29.)
then repeat steps 1–8 again.

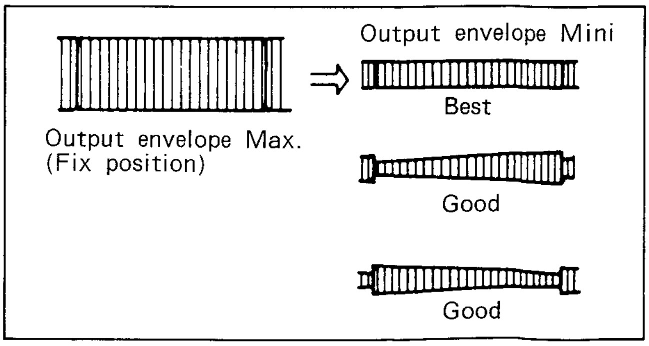

Output envelope Mini
Output envelope Max. (Fix position)
Best
Good
Good

Fig. M27

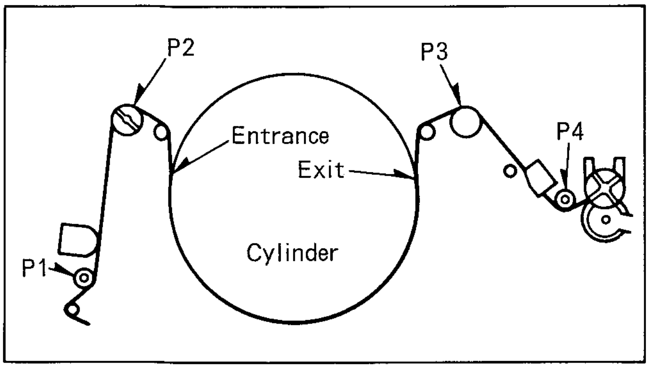

P2
P3
Entrance
Exit
P4
Cylinder
P1

Fig. M28 Loading of Posts

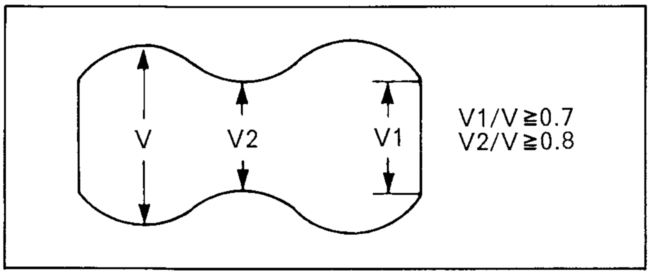

V
V2
V1
V1/V≧0.7
V2/V≧0.8

Fig. M29 Spec. of Envelope Figure

B. TILT ADJUSTMENT OF A/C HEAD

Note:
This procedure should be performed after replacing the A/C HEAD and pressure roller.

Playback the beginning portion of blank cassette tape and confirm that the tape runs between lower and upper limiter of P4 post. If there is waving of frilling in the lower edge or top edge of the tape correct the tilt on the A/C head by turning the screw (B) located behind the A/C head.

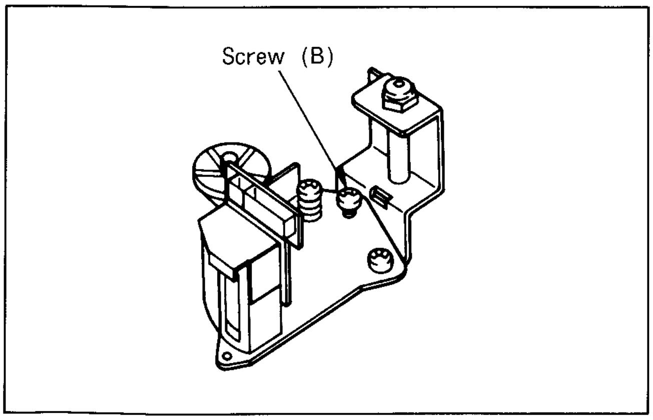


Fig. M30

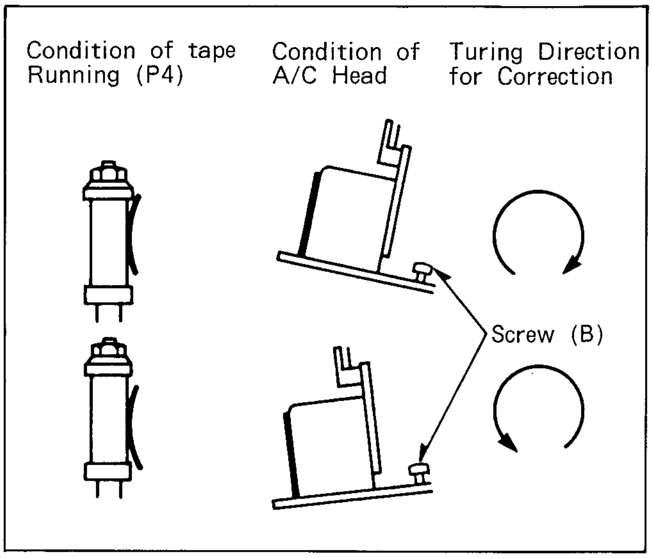

Condition of tape Running (P4)
Condition of A/C Head
Turing Direction for Correction
Screw (B)

Fig. M31

Note:
After Tilt adjustment of A/C head, height adjustment of A/C head is required.

C. HEIGHT ADJUSTMENT OF A/C HEAD

Note:
This procedure should be performed only when the A/C Head is replaced.

Equipment Required:
Check Light (VFK0343)
Nut Driver (Purchase locally)

With the tape running, look at the lower edge of the control head by using the check light and check if the lower edge of tape runs along the lower edge of the control head.
If it doesn't, slightly turn the nut (C) behind the A/C Head (Fig. M32) to either lower or raise the A/C head so that the tape runs along the lower edge of the control head.
Turn the nut (C) clockwise to lower the head and counter-clockwise to raise it.

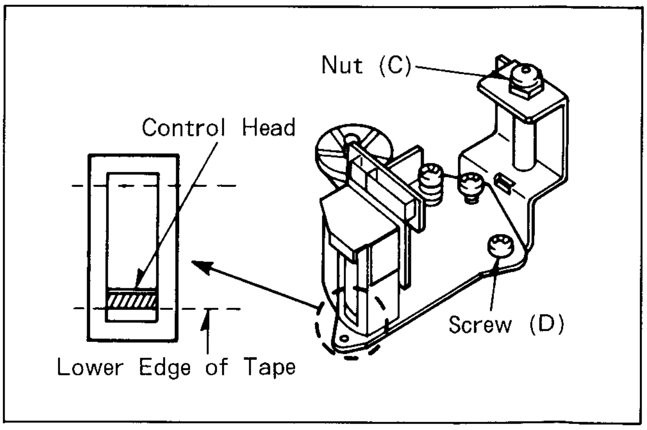

Nut (C)
Control Head
Screw (D)
Lower Edge of Tape

Fig. M32

D. AZIMUTH ADJUSTMENT OF A/C HEAD

Note:
This procedure should be performed only when the A/C Head is replaced and posts height are readjusted.

Equipment Required:
Alignment Tape (PAL Alignment Tape)

1. Connect the oscilloscope to the audio output on the rear panel.
2. Play back the 2nd portion (Normal Audio 6KHz) of the PAL alignment tape.
3. Adjust the screw (D) so that the output level becomes maximum.

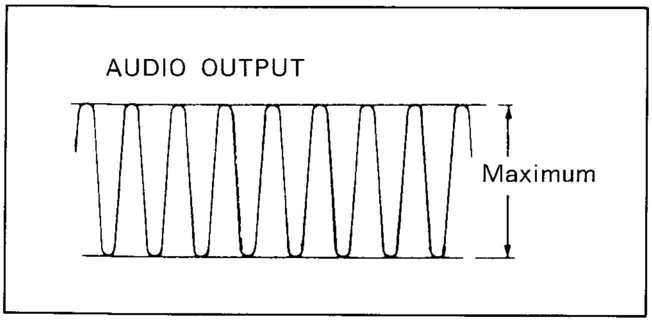


Fig. M33

E. HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD

Note:
This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

Equipment Required:
H–Position Adjustment Screwdriver (VFK0328)
Alignment Tape (PAL Alignment Tape)

1. Set the tracking control to the centre fix position.
2. Connect the oscilloscope to the output of Head Amp. (Refer to Fig. M24)
3. Play back the PAL alignment tape.
4. Adjust the Horizontal Position Screw of A/C head so that the RF signal becomes maximum level.

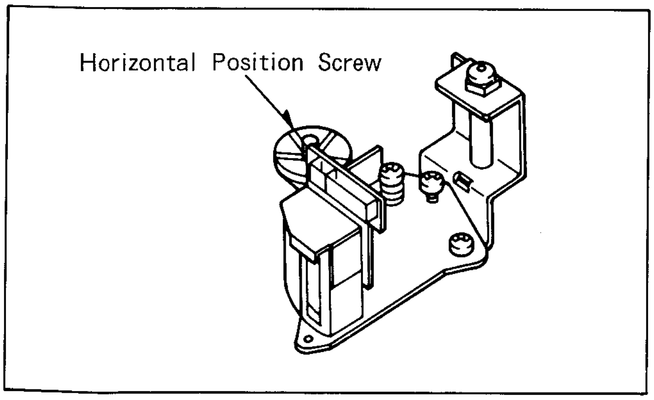


Fig. M34

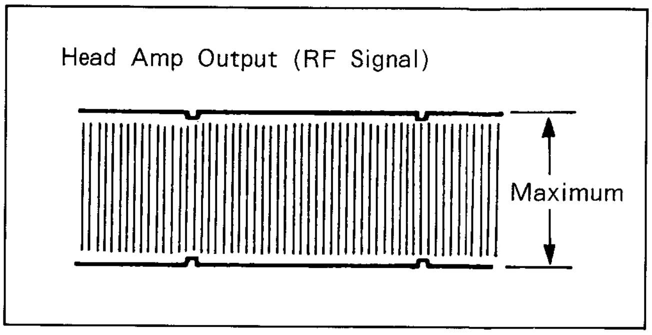


Fig. M35

5. ASSEMBLY AND ADJUSTMENT PROCEDURES OF MECHANISM

The mechanism is mostly engaged to the Systemcontrol Circuit, through the mode select switch.
Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on.
If these parts are not fixed properly, the unit will be unloaded or compulsorily stopped.
And it will result being damaged at any mechanical or electrical parts.

The overall mechanical condition (alignment) of bottom and top view are shown in Fig. M36 and Fig. M37. This mechanical adjustment is Performed in STOP mode.
The detail of mechanical condition will be described later.

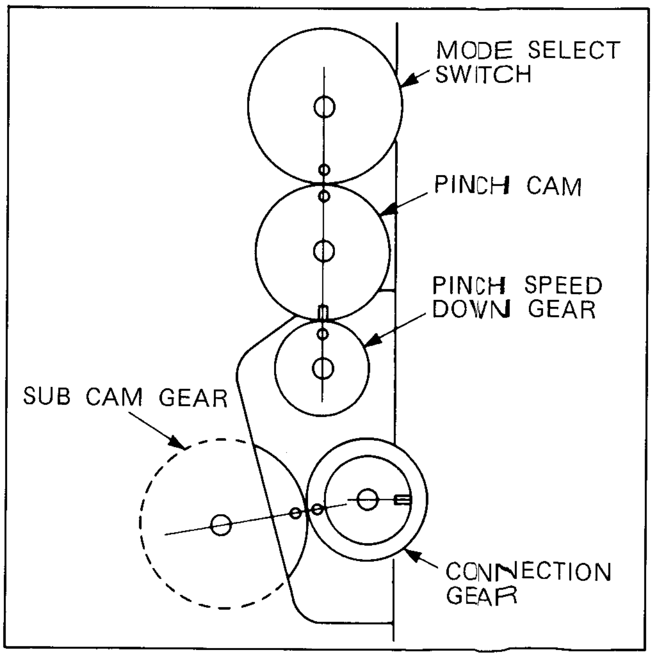


Fig. M36 Bottom View of Overall Mechanical Condition

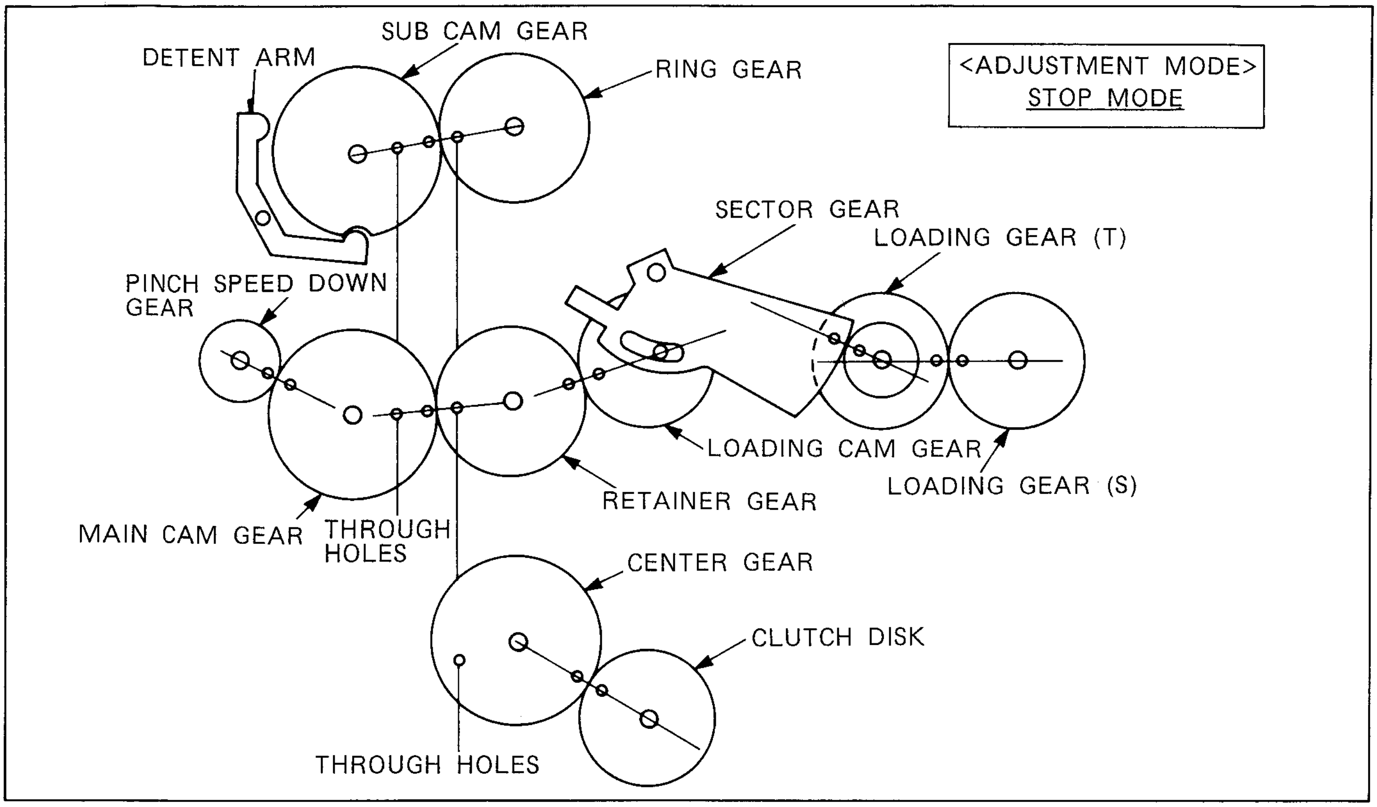

DETENT ARM
SUB CAM GEAR
RING GEAR
<ADJUSTMENT MODE>
STOP MODE
SECTOR GEAR
LOADING GEAR (T)
PINCH SPEED DOWN GEAR
LOADING CAM GEAR
LOADING GEAR (S)
RETAINER GEAR
MAIN CAM GEAR
THROUGH HOLES
CENTER GEAR
CLUTCH DISK
THROUGH HOLES

Fig. M37 Top View of Overall Mechanical Condition

5–1. ASSEMBLY PROCEDURES OF RING GEAR, SUB CAM GEAR AND DETENT ARM

1. Install the Ring Gear so that the hole of Ring Gear is exactly in line with the hole of chassis as shown Fig. M38.
2. Install the Sub Cam Gear so that the hole of Sub Cam Gear is exactly in line with the hole of chassis, at the same time, the small hole (located just out side of large hole) of Sub Cam Gear is exactly in line with the hole of Ring Gear.
3. Install the Detent Arm.

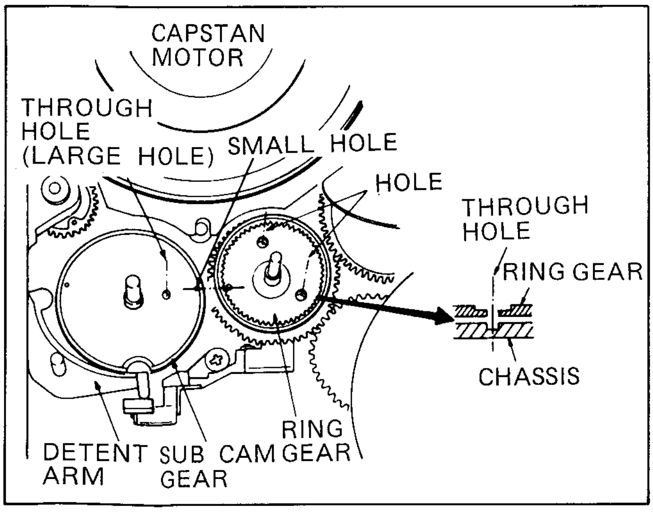

CAPSTAN MOTOR
THROUGH HOLE (LARGE HOLE)
SMALL HOLE
HOLE
THROUGH HOLE
RING GEAR
CHASSIS
DETENT ARM
SUB CAM GEAR
RING GEAR

Fig. M38

5–2. ASSEMBLY PROCEDURES OF MAIN CAM GEAR AND PINCH SPEED DOWN GEAR

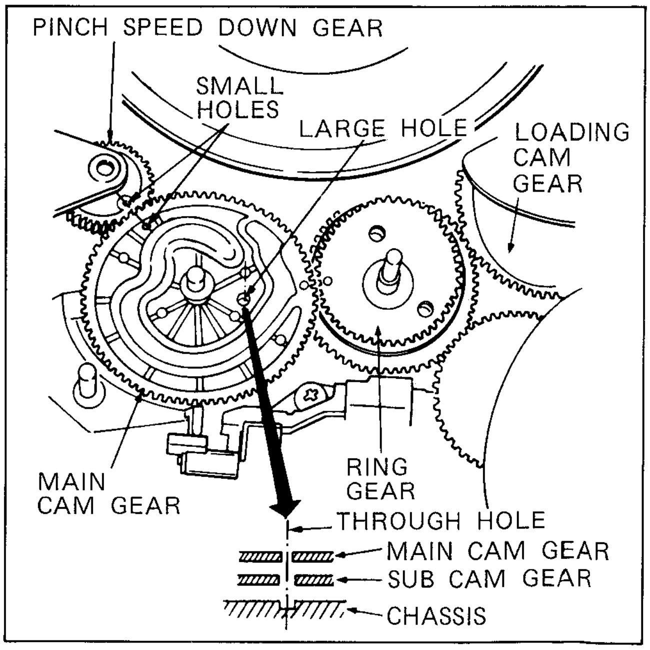

PINCH SPEED DOWN GEAR
SMALL HOLES
LARGE HOLE
LOADING CAM GEAR
MAIN CAM GEAR
RING GEAR
THROUGH HOLE
MAIN CAM GEAR
SUB CAM GEAR
CHASSIS

Fig. M39

1. Install the Pinch Speed Down Gear from top side of chassis
2. Install the Main Cam Gear on to the Sub Cam Gear so that the small hole of Main Cam Gear is exactly in line with the small hole of Pinch Speed Down Gear.
   And the large hole of Main Cam Gear is exactly in line with the large Hole of Sub Cam Gear as shown in Fig. M39.

5–3. ASSEMBLY PROCEDURES OF LOADING CAM GEAR AND RETAINER GEAR

1. Install the Loading cam Gear so that the end of Sub Loading Arm comes to the rift (A) of Loading Cam Gear as shown in Fig. M40 Rotate the installed Loading Cam Gear so that small hole on Loading Cam Gear comes to around centre of Ring Gear as shown in Fig. M41.

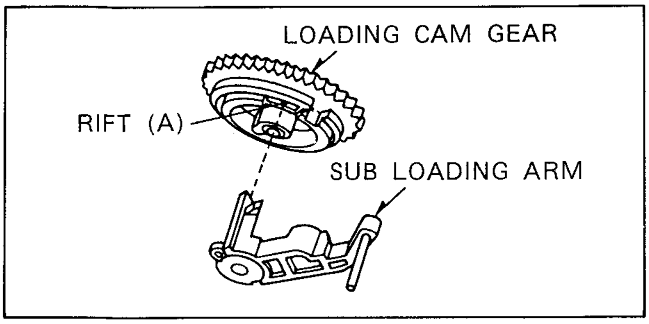

LOADING CAM GEAR
RIFT (A)
SUB LOADING ARM

Fig. M40

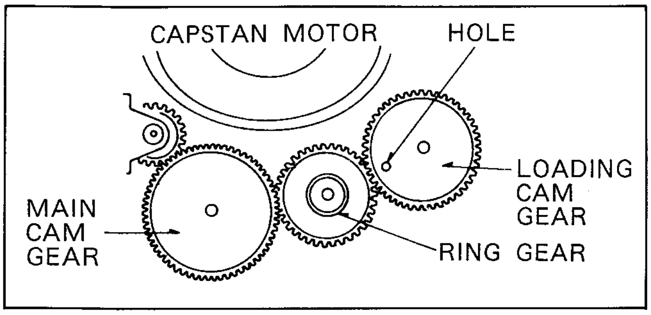

CAPSTAN MOTOR
HOLE
MAIN CAM GEAR
LOADING CAM GEAR
RING GEAR

Fig. M41

2. Install the Retainer Gear on to the Ring Gear so that the hole of Retainer Gear is exactly in line with the hole of Main Cam Gear at this time, this hole of Retainer Gear also is exactly in line with the hole of Ring Gear (underneath).
   At the same time another hole of Retainer Gear is exactly in line with the hole of Loading Cam Gear as shown in Fig. M42.

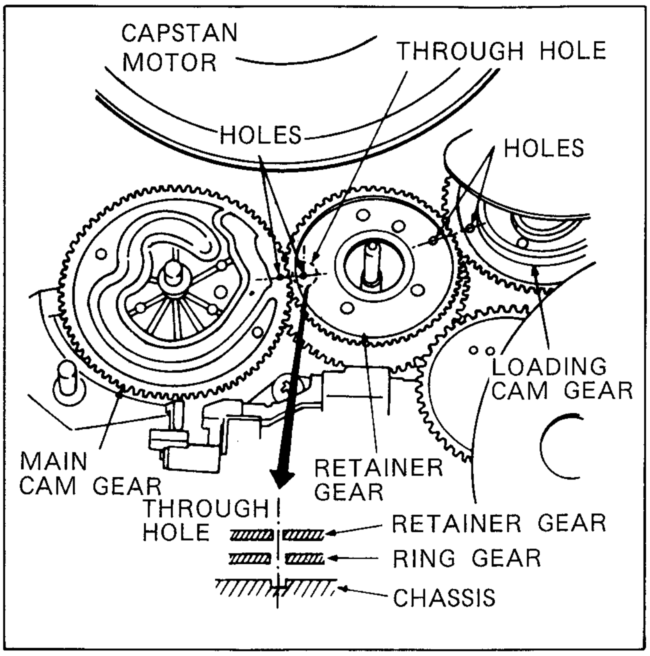

CAPSTAN MOTOR
THROUGH HOLE
HOLES
HOLES
LOADING CAM GEAR
MAIN CAM GEAR
RETAINER GEAR
THROUGH HOLE
RETAINER GEAR
RING GEAR
CHASSIS

Fig. M42

5–4. ASSEMBLY PROCEDURES OF CENTRE GEAR

1. Install the Centre Gear on to the Retainer Gear so that the hole of Center Gear is exactly in line with the hole of Retainer Gear, at this time, another hole of Center Gear is exactly in line with the small hole of Clutch Disk, then insert the cut washer.

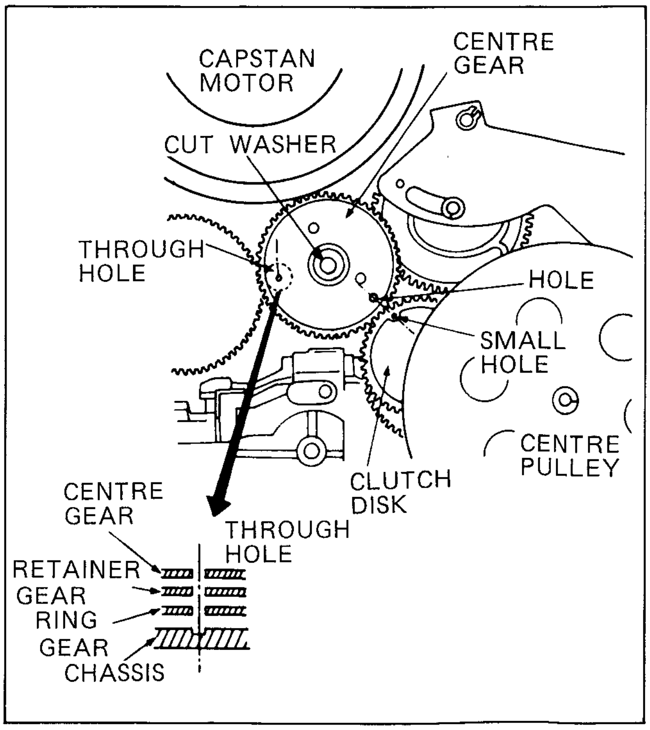

CAPSTAN MOTOR
CENTRE GEAR
CUT WASHER
THROUGH HOLE
HOLE
SMALL HOLE
CENTRE PULLEY
CLUTCH DISK
CENTRE GEAR
THROUGH HOLE
RETAINER GEAR
RING GEAR
CHASSIS

Fig. M43

5–5. ASSEMBLY PROCEDURES OF MAIN LEVER (1) UNIT AND CAM FOLLOWER ARM UNIT

1. Install the Main Lever (1) Unit and then insert the cut washers and hitches the spring as shown in Fig. M44.

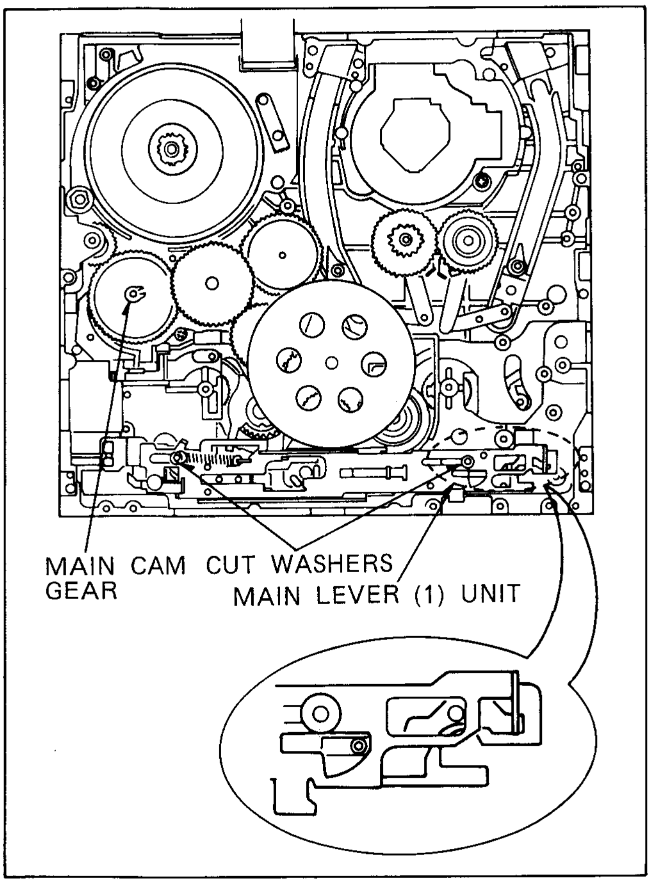

MAIN CAM GEAR
CUT WASHERS
MAIN LEVER (1) UNIT

Fig. M44

2. Install the Cam Follower Arm Unit so that the pin of Cam Follower Arm insert to the groove of Main Cam Gear then insert a retaining ring.

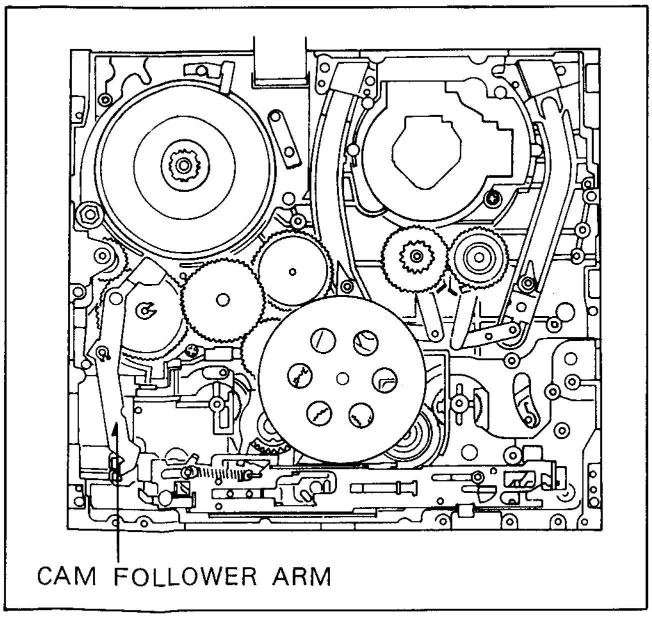

CAM FOLLOWER ARM

Fig. M45

5–6. ASSEMBLY PROCEDURES OF LOADING GEAR (T), LOADING GEAR (S), SECTOR GEAR, ROLLER TENSION UNIT AND SS BRAKE ARM UNIT

1. Set the P2 and P3 posts to unloading position, then install the Loading Gear (T) and (S) so that the hole of Loading Gear (T) is exactly in line with the hole of Loading Gear (S).
2. Install the Sector Gear so that the hole of Sector Gear is exactly in line with the projection mark of Loading Gear (T). Then insert the retaining rings.
3. Install the Tension Roller Unit and SS Brake Unit, then tighten the screws.

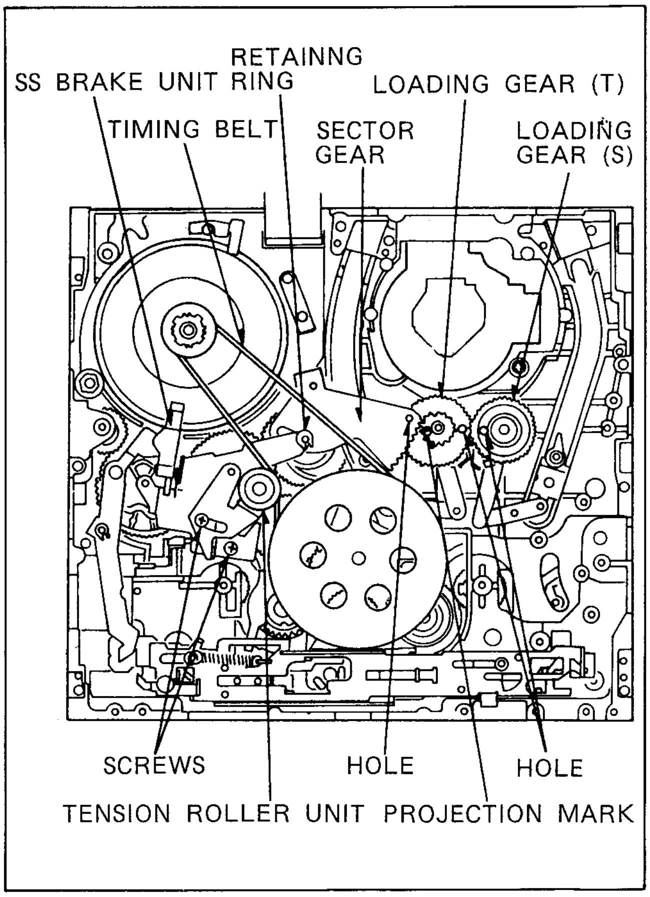

RETAINNG RING
SS BRAKE UNIT
LOADING GEAR (T)
TIMING BELT
SECTOR GEAR
LOADING GEAR (S)
SCREWS
HOLE
HOLE
TENSION ROLLER UNIT
PROJECTION MARK

Fig. M46

5-7. ASSEMBLY PROCEDURES OF CONNECTION GEAR

Note:
Before this assembling, Sub Cam Gear position (and positions of bottom side gears) must be in correct positions as described before.
Install the connection gear so that the small hole of connection gear is exactly in line with the small hole of Sub Cam Gear as shown in Fig. M47.

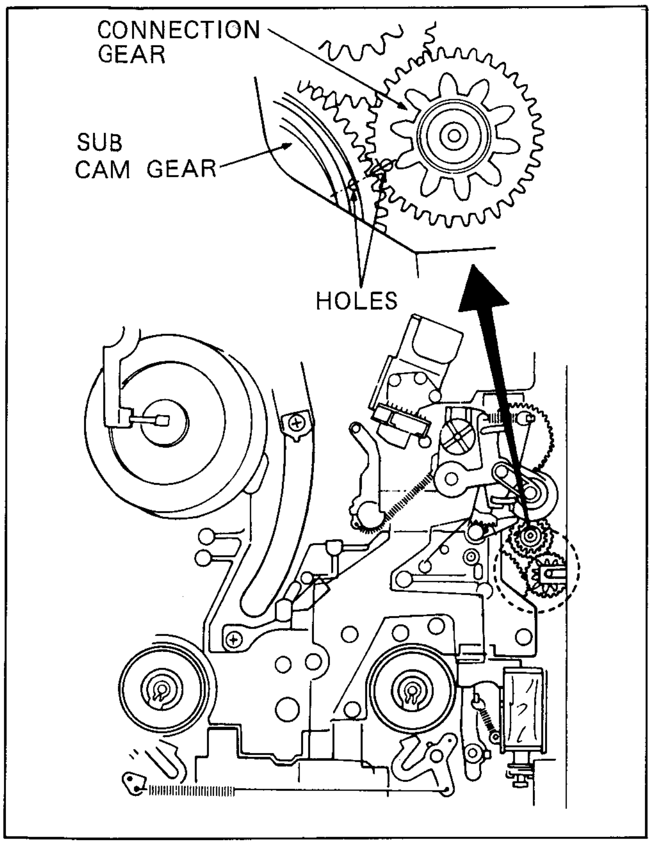

CONNECTION GEAR
SUB CAM GEAR
HOLES

Fig. M47

5-8. ASSEMBLY PROCEDURES OF MODE SELECT SWITCH AND P5 PULL OUT SECTOR GEAR

1. Install the Mode Select Switch and tighten a screw, then solder the 5 soldering portions.
2. Install the P5 Pull Out Sector Gear so that the hole of P5 Pull Out Sector Gear is exactly in line with the tip of edge at P5 gear as shown in Fig. M48.

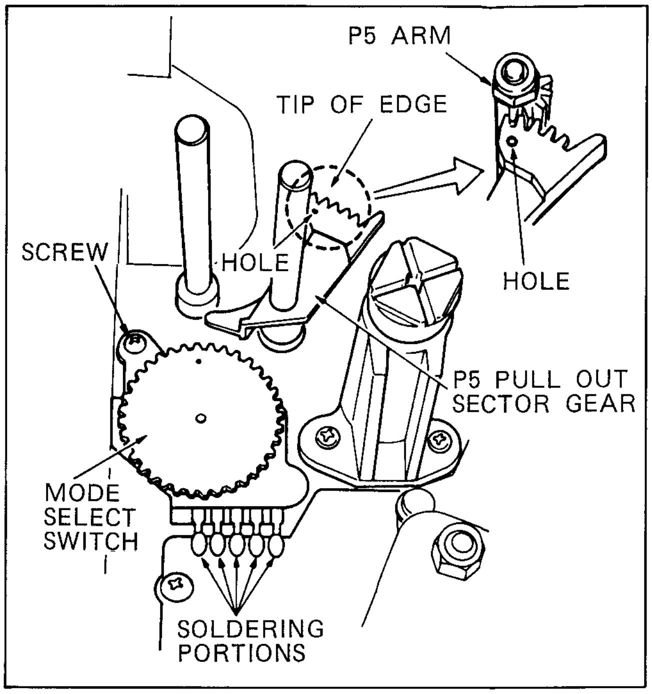

P5 ARM
TIP OF EDGE
SCREW
HOLE
HOLE
P5 PULL OUT SECTOR GEAR
MODE SELECT SWITCH
SOLDERING PORTIONS

Fig. M48

5-9. ASSEMBLY PROCEDURES OF PINCH CAM AND PRESSURE ROLLER UNIT

1. Install the Pinch Cam so that the edge of P5 Arm comes into the Rift of Pinch Cam and Projection of Pinch Cam is exactly in line with the hole of Pinch Speed Down Gear, at this time, the hole of Mode Select Switch is exactly in line with the hole of Pinch Cam as shown in Fig. M49.
2. Install the Pressure Roller Unit, then install the Pinch Cam Cap.

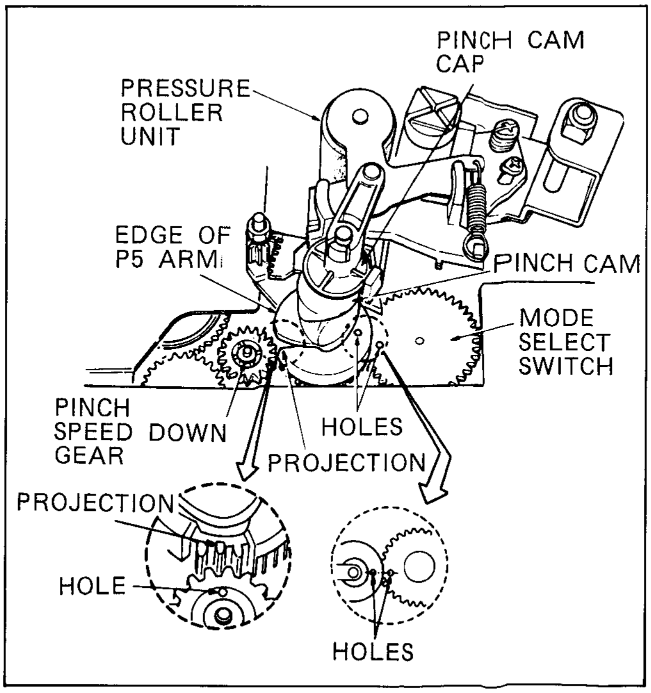

PINCH CAM CAP
PRESSURE ROLLER UNIT
EDGE OF P5 ARM
PINCH CAM
MODE SELECT SWITCH
PINCH SPEED DOWN GEAR
HOLES
PROJECTION
PROJECTION
HOLE
HOLES

Fig. M49

5–10. REINSTALLATION OF CASSETTE COMPARTMENT FROM STOP POSITION (HALFLOADING)

When reinstall the cassette compartment, the position adjustment (alignment) of mechanism is necessary for correct working as follows.

1. Set the mechanism condition to Stop (FF/REW) position by means of turning capstan motor as follows.:

   (1) Release the Change Lever by pushing it to arrow mark direction as shown in Fig. M51.
   (2) Turn the capstan motor to clockwise until the Clutch Disk is locked.
   (Clutch Disk is locked onece in its one rotation)
   (3) Release the Change Lever again when Clutch Disk has been locked.
   (4) Repeat item (1) to (3) untill mechanism comes to Stop position as shown in Fig. M50.
   * To confirm the Stop position Just turn the capstan motor. And confirm that takeup reel table is rotated when capstan is rotated to clockwise and supply reel table is rotated when capstan is rotated to counter clockwise. This is Stop mode.

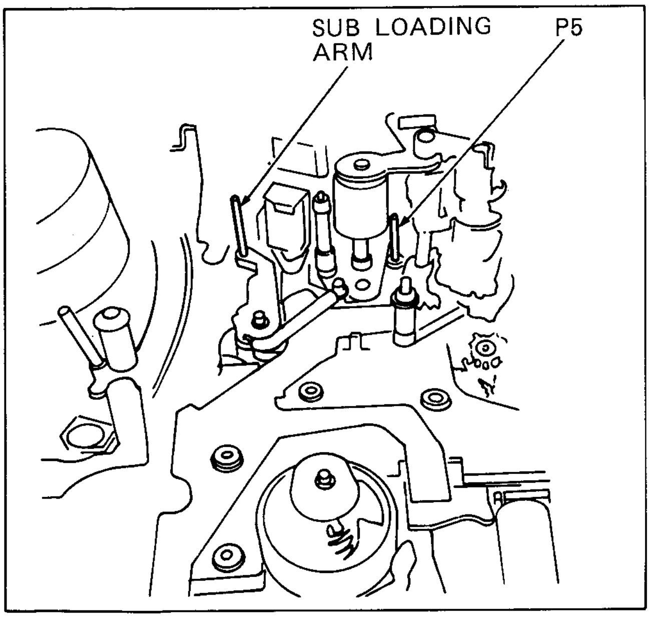


Fig. M50 STOP Condition

2. Remove the 2 screws (A) as shown in Fig. M52.
3. Take the top plate out.

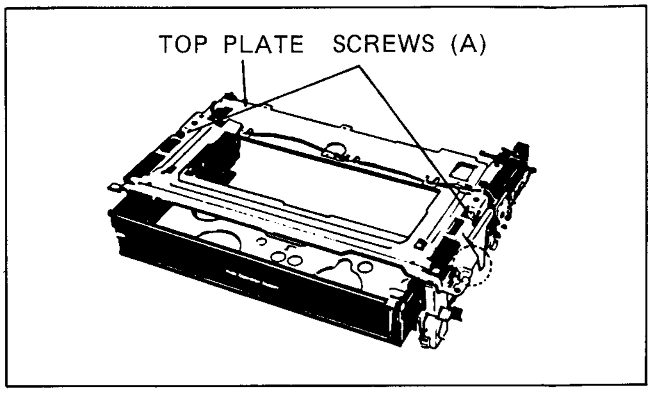


Fig. M52

4. Take the cassette Holder unit out as shown in Fig. M53.

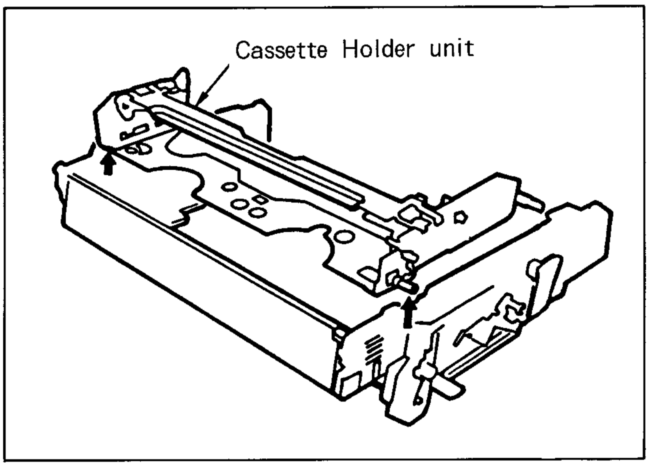


Fig. M53 Removal of Cassette Holder Unit

5. Press the sub wiper arm (R) to direction indicated by arrow so that the sub wiper arm comes to cassette down position completely as shown in Fig. M54 and keep it.

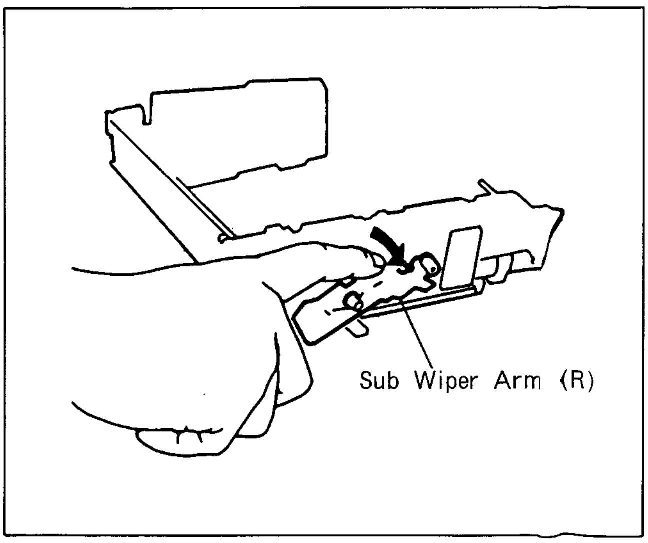


Fig. M54

6. Reinstall the cassette compartment (without Cassette Holder) to chassis so that the first tip of Rack Gear A (1) comes to Marking Slot of Connection Gear as shown in Fig. M55.

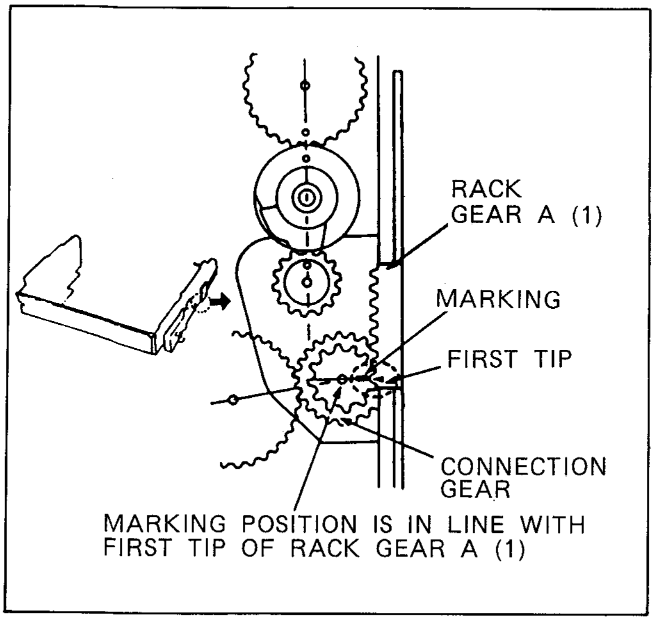

RACK GEAR A (1)
MARKING
FIRST TIP
CONNECTION GEAR
MARKING POSITION IS IN LINE WITH FIRST TIP OF RACK GEAR A (1)

Fig. M55

7. Tighten the 4 screws (D) as shown in Fig. M56.

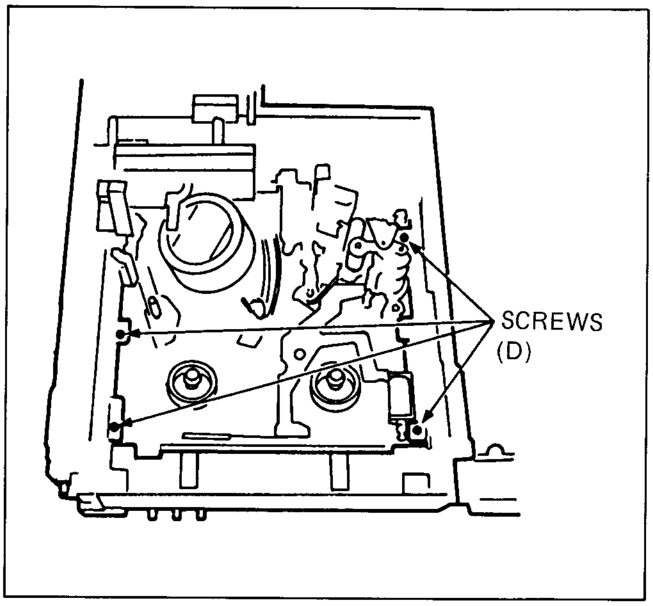


Fig. M56

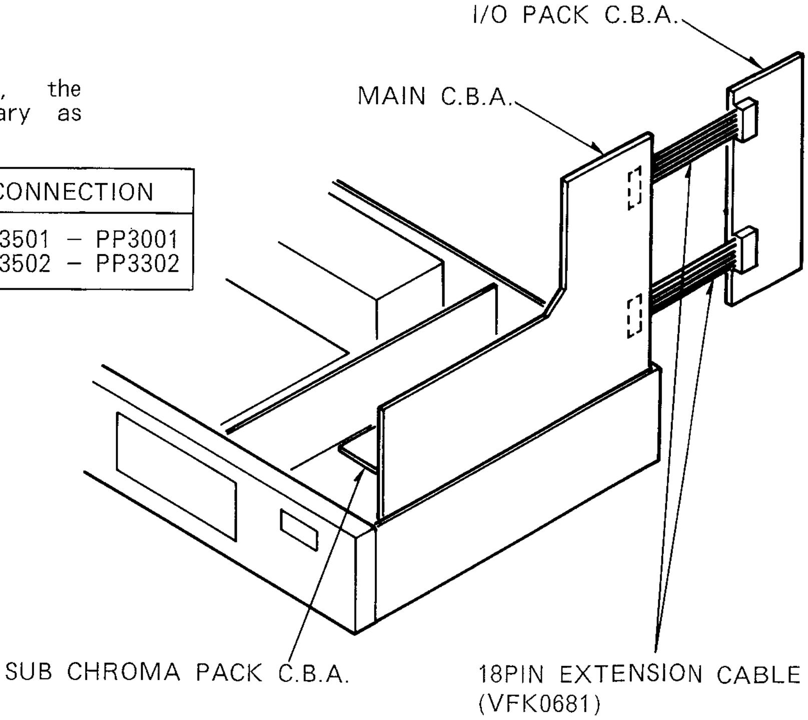
8. Repeat pressing the change lever and turn the capstan motor to counter clockwise until mechanism is placed to Eject position.
9. Reinstall the cassette holder unit as just the reverse way of item 4, Fig. M53.
10. Reinstall the top plate as just the reverse way of item 3, Fig. M52.

[SERVICE INFORMATION]

Servicing the I/O Pack C.B.A.

When servicing the I/O Pack C.B.A., the connections of extension cables are necessary as shown below.

PART NUMBER	PART NAME	PCS	CONNECTION
VFK0681	18P EXTENSION CABLE	2	PK3501 – PP3001 PK3502 – PP3302


I/O PACK C.B.A.
MAIN C.B.A.
SUB CHROMA PACK C.B.A.
18PIN EXTENSION CABLE
(VFK0681)

ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete electrical adjustment procedures which maybe required for electronic circuits of VHS Video Cassette Recorder.

1. TEST AND SERVICE EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

1. Dual-Trace Oscilloscope. (More than 35MHz)

   Voltage Range : 0.005-5V/div
   Frequency Range : DC-35MHz
   Probes : 10:1

2. Vectorscope. (NTSC, PAL, PAL-M, PAL-N)
3. Frequency Counter

   Frequency Range : 0-10MHz
   Probes : 1:1

4. Vacuum Tube Volt Meter. (V.T.V.M)
5. Video Sweep Generator. (PAL)
6. Sine Wave Generator.

   Frequency Range : 0-10MHz

7. Video Pattern Generator. (NTSC, PAL, SECAM, PAL-M, PAL-N)
8. VHS Alignment Tape.

   NTSC : VFM8080HQFP
   PAL : VFM8180HADH or VFJ8125H3F

9. Blank Tape.
10. Plastic Tip Driver.

2. PREPARATION

Before adjustments, Set each selector or equipment as follows when no indication on each procedures.

1. Picture VR ——————————— Centre Fix
2. Tape Speed Selector ———————— SP
3. EDIT SW ——————————— OFF
4. Play Back Tape Selector (REAR) —— AUTO
5. Probe for Oscilloscope —————— 10:1

To perform adjustments, 5 system (NTSC, PAL, SECAM, PAL-M, PAL-N) equipments are required, And it is best condition for adjustments of universal VTR. Figure E1 shows simplified adjustment system by using two universal VTR.

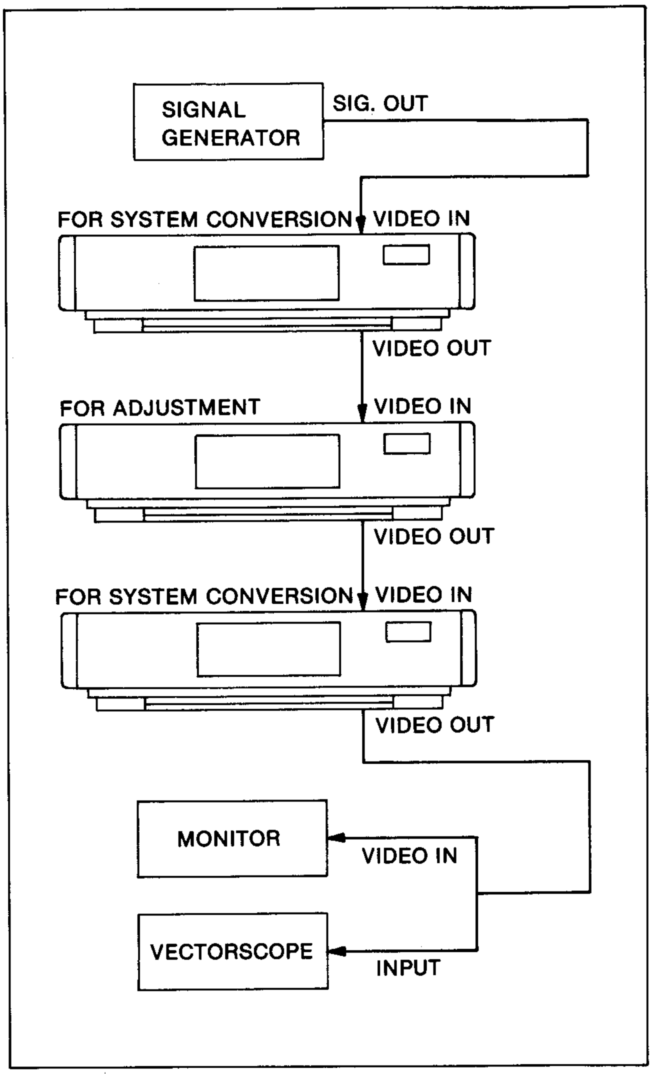
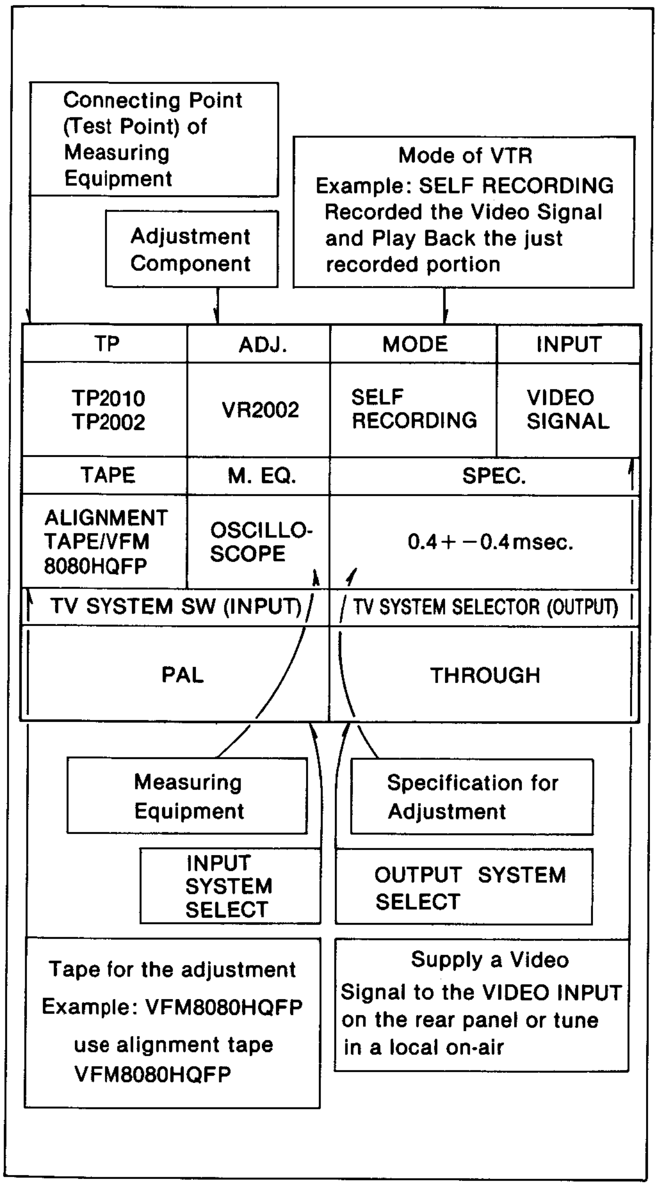

SIGNAL GENERATOR
SIG. OUT
FOR SYSTEM CONVERSION
VIDEO IN
VIDEO OUT
FOR ADJUSTMENT
VIDEO IN
VIDEO OUT
FOR SYSTEM CONVERSION
VIDEO IN
VIDEO OUT
MONITOR
VIDEO IN
VECTORSCOPE
INPUT

Fig. E1

Note:
To obtain the PAL-N sigal by using another universal VTR, should be supply EXCEPT PAL signal (NTSC or SECAM) to VIDEO IN.
When supply PAL-N signal and select THROUGH mode, then PAL signal is output from terminal. (Select PAL-N mode on the touch panel)

3. ADJUSTMENT PROCEDURES

HOW TO READ ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
Adjustment Component
Mode of VTR
Example: SELF RECORDING Recorded the Video Signal and Play Back the just recorded portion
Measuring Equipment
Specification for Adjustment
INPUT SYSTEM SELECT
OUTPUT SYSTEM SELECT
Tape for the adjustment
Example: VFM8080HQFP use alignment tape VFM8080HQFP
Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on-air

TP	ADJ.	MODE	INPUT
TP2010 TP2002	VR2002	SELF RECORDING	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE/VFM 8080HQFP	OSCILLO-SCOPE	0.4+−0.4msec.	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

Fig. E2

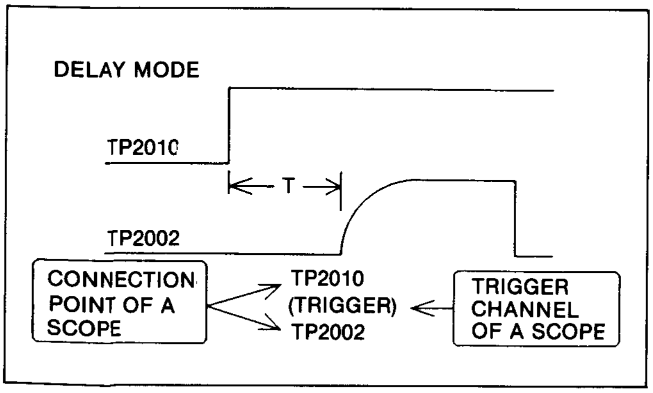

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010 (TRIGGER) TP2002
TRIGGER CHANNEL OF A SCOPE

Fig. E3

SERVO SECTION

1. AUTO TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
PJ6003-8	VR3003	STOP	4MHz, 200mVp-p SINE WAVE TO TP3001
TAPE	**M. EQ.**	**SPEC.**	
	D.V.M Sinewave Generator	3.1±0.1V	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

1. Supply 4MHz, 200mVp−p to TP3001.
2. Adjustment VR3003 so that the voltage at Pin 8 of PJ6003 becomes 3.0+−0.1V.

2. SLOW FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2015	VR2013	SP (SELF RECORDED) STILL	PAL MONO SCOPE (B/W SIGNAL)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE (LARGE REEL TYPE)	FREQUENCY COUNTER	435±15Hz	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH (MONITOR: PAL)	

1. Record PAL video signal in SP mode for few time and playback just recorded portion. And then place the unit in STILL mode.
2. Connect a jumper wire between TP2026 to GND.
3. Adjust VR2013 so that the frequency at TP2015 becomes 453+−15Hz.

3. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001N (NTSC) VR2001P (PAL)	PLAYBACK	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE NTSC PAL	OSCILLO-SCOPE	7.0±0.3H	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

Note:
Play back PORTION "2" when using VFM8080HQFP (NTSC) or VFM8180HADH (PAL).

Note:
Tape Interchangeability adjustments must be completed by PAL ALIGNMENT TAPE, before this adjustment.

1. Playback NTSC Alignment tape.
2. Adjust VR2001N so that phase relation between TP2001 and TP3002 becomes 2.0+−0.3H.
3. Playback PAL Alignment tape.
4. Adjust VR2001P so that phase relation between TP2001 and TP3002 becomes 7.0+−0.3H.

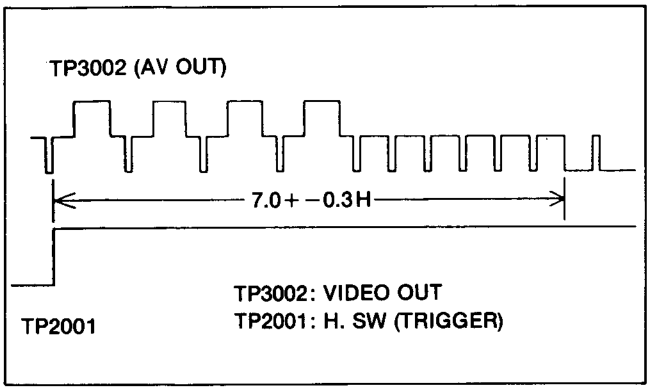


Fig. E4

4. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR TV	VR2011 (PAL-SP) VR2006 (PAL-LP) VR2020 (NTSC-SP) VR2022 (NTSC-LP) VR2021 (NTSC-SLP)	SP/LP (SELF RECORDED) SLOW	PAL/NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE (LARGE REEL TYPE)	MONITOR TV	NO NOISE BAND ON MONITOR TV	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL/NTSC (DEPENDING ON INPUT)		THROUGH	

Note:
Playback prerecorded tape for only NTSC−LP SLOW TRACKING ADJUSTMENT.

1. Set the TV system SW for PAL and record PAL video signal in SP mode for few time and playback just recorded portion. And then place the unit in SLOW mode.
2. Adjust VR2011 so that noise bar disappears from screen.
3. Record PAL video signal in LP mode for few time and playback just recorded portion. And then place the unit in SLOW mode.
4. Adjust VR2006 so that noise bar disappears from screen.
5. Set the TV system SW for NTSC and record NTSC video signal in SP mode for few time and playback just recorded portion. And then place the unit in SLOW mode.
6. Adjust VR2020 so that noise bar disappears from screen.
7. Record NTSC video signal in SLP mode (Multi function display indicates "LP") for few time and playback just recorded portion. And then place the unit in SLOW mode.
8. Adjust VR2021 so that noise bar disappears from screen.
9. Playback NTSC−LP prerecorded tape and place the unit in SLOW mode.
10. Adjust VR2022 so that noise bar disappears from screen.

5. ARTIFICIAL V-SYNC ADJUSTMENT

TP	ADJ.	MODE	INPUT
LUMI/CHRO PACK 20PIN TP2009	VR3502 (PAL-SP) VR3503 (NTSC-SP) VR3501 (NTSC-EP)	SP/LP (SELF RECORDED) STILL	PAL/NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	$T_1-T_2=128\pm20\mu sec$ (PAL-SP) $T_1-T_2=63.5\pm20\mu sec$ (NTSC-SP) $T_1-T_2=63.5\pm20\mu sec$ (NTSC-SLP)	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL/NTSC (DEPENDING ON INPUT		THROUGH	

1. Set the TV system SW for PAL and record PAL video signal in SP mode for few time and playback just recorded portion. And then place the unit in STILL mode.
2. Adjust VR3502 so that calculation of T1−T2 becomes 128+−20 usec.
3. Set the TV system SW for NTSC and record NTSC video signal in SP mode for few time and playback just recorded portion. And then place the unit in STILL mode.
4. Adjust VR3503 so that calculation of T1−T2 becomes 63.5+−20usec.
5. Record NTSC video signal in SLP mode)Multi function display indicates "SP") for few time and playback just recorded portion. And then place the unit in STILL mode.
6. Adjust VR3501 so that calculation of T1−T2 becomes 63.5+−20usec.

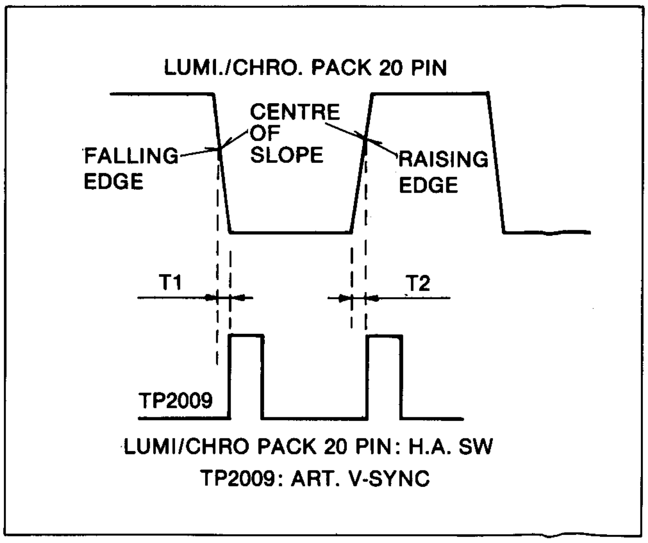


Fig. E5

LUMINANCE & CHROMINANCE SECTION

1. Y-NR BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
C322 "+" SIDE	VR301	SP RECORDING	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO- SCOPE	MINIMIZED AS POSSIBLE (Less than 50mVp-p)	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

1. Record PAL colour bar in SP mode.
2. Adjust VR301 so that the amplitude at C322 "+" side becomes minimum. (less than 50mVp–p)

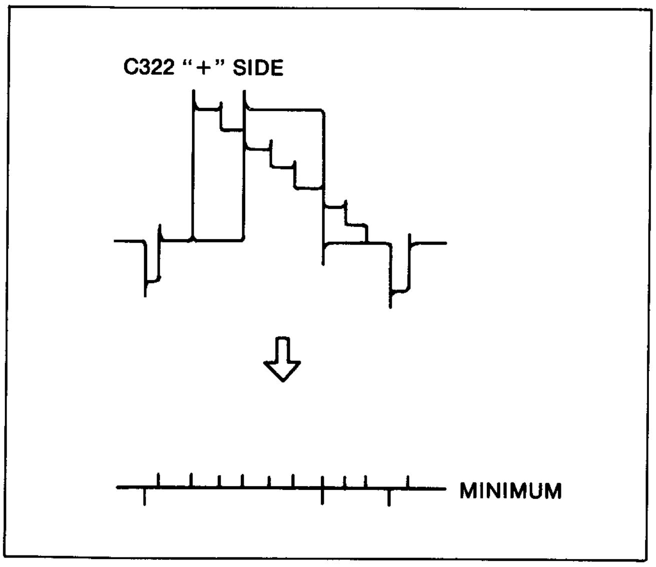


Fig. E6

2. SECAM KILLER ADJUSTMENT 1

TP	ADJ.	MODE	INPUT
IC851-11	T851	SP RECORDING	SECAM COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO- SCOPE	MAXIMUM AMPLITUDE ("A" PORTION: NEGATIVE PEAK)	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Record SECAM colour bar.
2. Adjust T851 so that the amplitude at Pin 11 of IC851 becomes maximum. ("A" portion becomes negative peak.)

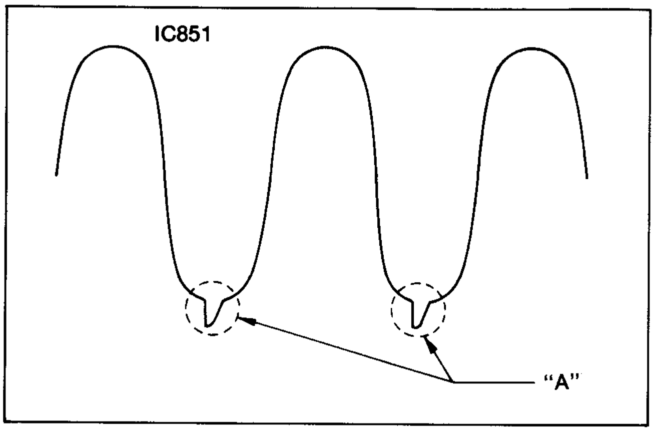


Fig. E7

3. SECAM KILLER ADJUSTMENT 2

TP	ADJ.	MODE	INPUT
IC8602-11	T8601	SP RECORDING	SECAM COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO- SCOPE	MAXIMUM AMPLITUDE ("A" PORTION: NEGATIVE PEAK)	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Record SECAM colour bar.
2. Adjust T8601 so that the amplitude at Pin 11 of IC8602 becomes maximum. ("A" portion becomes negative peak)

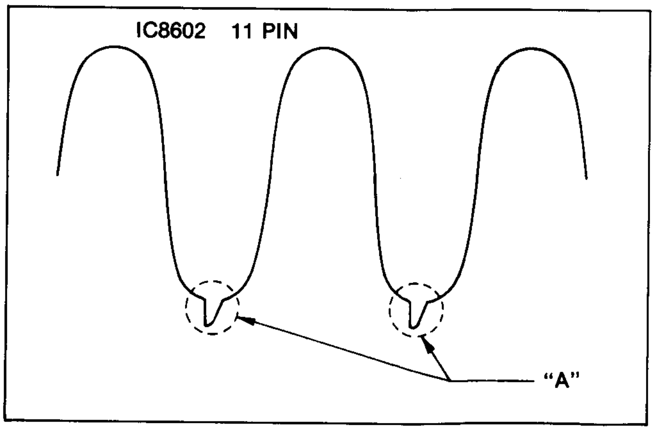


Fig. E8

4. SECAM BELL FILTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC8601-8	FL8601	SP RECORDING	4.286MHz 800mVp-p SINE WAVE
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	MAXIMUM AMPLETUDE	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Supply 4.286MHz, 800mVp–p SINE Wave to VIDEO IN terminal.
2. Place the unit in Recording mode.
3. Adjust FL8601 so that the amplitude at Pin 8 of IC8601 becomes maximum.

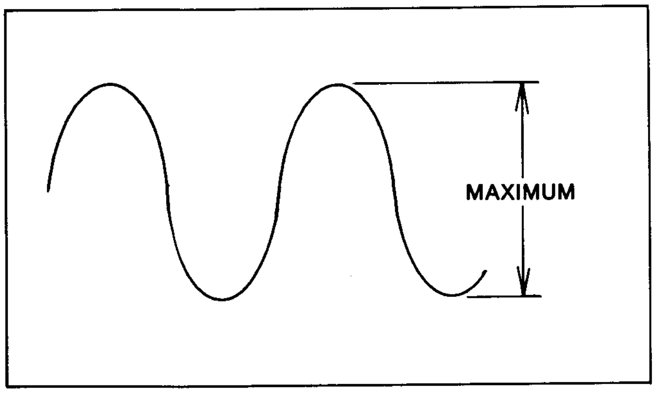


Fig. E9

5. AGC LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3901	STOP	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	1.0±0.05Vp-p	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

Note:
VIDEO out should be terminated by 75 ohm.

1. Input PAL colour bar to VIDEO IN.
2. Adjust VR3901 so that the waveform level at VIDEO out terminal becomes 1.0+–0.05Vp–p.

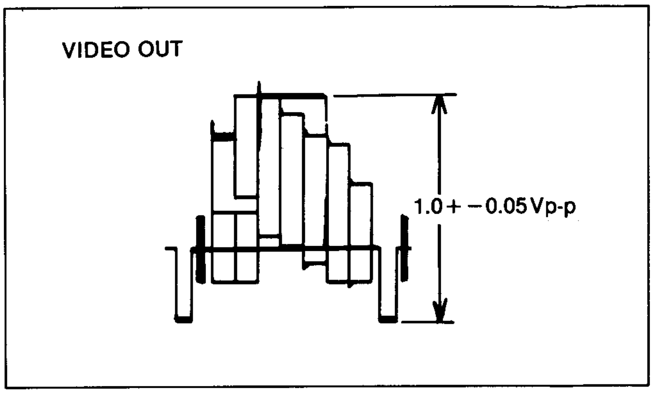


Fig. E10

6. SECAM BLANKING PULSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002 TP8006	VR8009	SP RECORDING	SECAM COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	T=1.2±0.2μsec	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Record SECAM colour bar.
2. Adjust VR8009 so that the phase relation between H–Sync (TP3002) and Recording chroma (TP8006) becomes 1.2+–0.2usec as shown in Fig. E11.

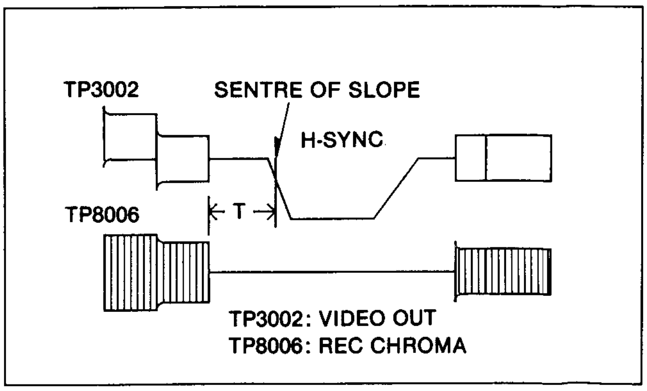


Fig. E11

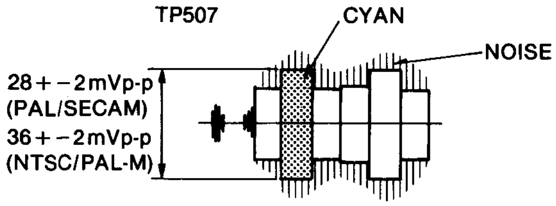
7. CHROMINANCE RECORDING CURRENT ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
TP507 (HOT) TP508 (GND)	VR8004 (PAL) VR8005 (NTSC) VR8006 (SECAM) VR8011 (PAL-M)	SP RECORDING	PAL/NTSC/SECAM/PAL-M COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE (MORE THAN 35MHz)	28±2mVp-p (PAL/SECAM) 36±2mVp-p (NTSC/PLA-M)	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL/NTSC/SECAM/PAL-M		THROUGH	

Note:

1. Connect Pin 9 of 3001 to 5V Line (TP1001) to reduce Luminance component.
2. Do not count noise portion as shown in Fig. E12.

1. Set the TV SYSTEM SW for PAL and input PAL colour bar to VIDEO IN. And then place the unit in SP RECORDING mode.
2. Adjust VR8004 so that the amplitude of chrominance recording current Cyan portion at TP507 becomes 28+–2mVp–p.
3. Set the TV SYSTEM SW for SECAM and input SECAM colour bar to VIDEO IN. And then place the unit in SP RECORDING mode.
4. Adjust VR8006 so that the amplitude of chrominance recording current Cyan portion at TP507 becomes 28+–2mVp–p.
5. Set the TV SYSTEM SW for NTSC and input NTSC colour bar to VIDEO IN. And then place the unit in SP RECORDING mode.
6. Adjust VR8005 so that the amplitude of chrominance recording current at TP507 becomes 36+–2mVp–p.
7. Set the TV SYSTEM SW for PAL–M and input PAL–M colour bar VIDEO IN. And then place the unit in SP RECORDING mode.
8. Adjust VR8011 so that the ampletude of chrominance recording current Cyan portion at TP507 becomes 36782mVp–p.



Actually, waveforms are slightly diffelence on each system.

TP507: RECORDING CURRENT

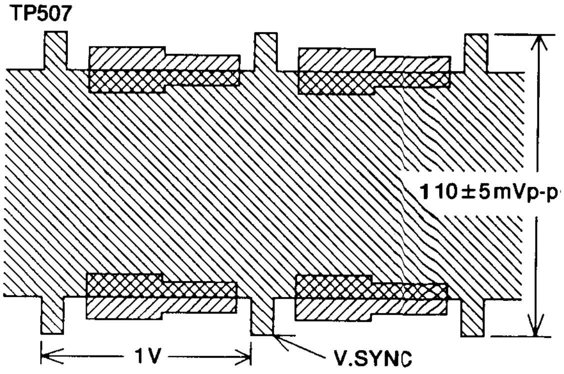
Fig. E12

8. LUMINANCE RECORDING CURRENT ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
TP507 (HOT) TP508 (GND)	VR501	SP RECORDING	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	110±5mVp-p	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

Note:
Chrominance Recording Current adjustment must be completed before this adjustment.

1. Record PAL colour bar in SP mode.
2. Adjust VR501 so that the ampletude of SYNC TIP portion becomes 110+–5mVp–p.



TP507: RECORDING CURRENT

Fig. E13

9. FREQUENCY RESPONCE ADJUSTMENT

TP	**ADJ.**	**MODE**	**INPUT**
VIDEO OUT	VR3001 (SP) VR3002 (LP)	SP/LP (SELF RECORDED) PLAYBACK	PAL SWEEP
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE PAL VIDEO SWEEP GEN.	B/A=0±1dB (SP) (90~110%) B/A=−2±1dB (LP) (70~90%)	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

Note:
1. EDIT SW must be OFF.
2. Pin 7 of P3001 (REC Chroma) must be connect to GND during adjustment.
3. PICTURE VR must be centre click position.

1. Set the output of PAL VIDEO SWEEP GENERATOR as shown in Fig. E14.

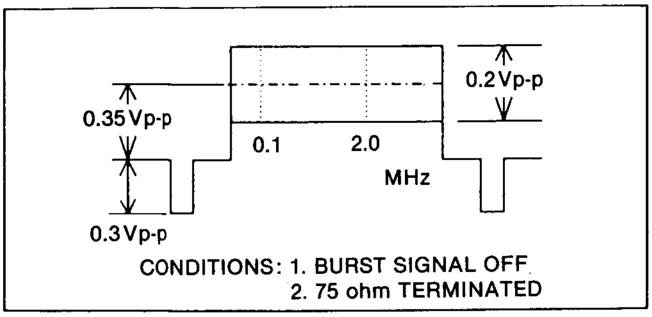


Fig. E14

2. Record set up PAL SWEEP signal for few time in SP mode and playback the just recorded portion.
3. Adjust VR3001 so that frequency response at VIDEO out becomes 0+−1dB on 2MHz portion against 0.1MHz portion.
4. Record set up PAL SWEEP signal for few time in LP mode and playback just recorded portion.
5. Adjust VR3002 so that frequency response at VIDEO out becomes −2+−1dB on 2MHz portion against 0.1MHz portion.

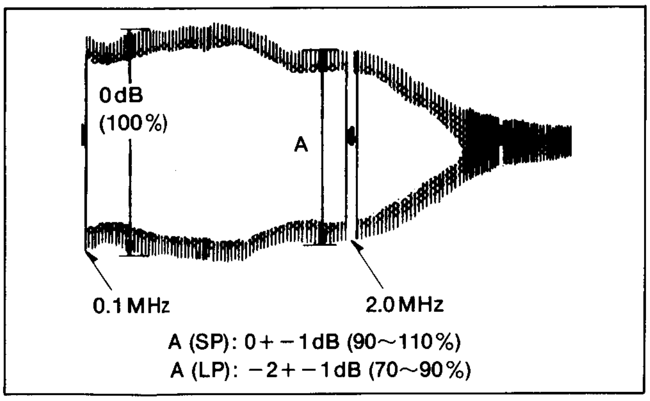


Fig. E15

10. 0.32H JUMP DELAY LUMINANCE LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3801	SP (SELF RECORDED) STILL	NTSC MONO SCOPE (B/W SIGNAL)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	THROUGH LEVEL AND DELAY LEVEL BECOMES SAME.	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		THROUGH	

Note:
Connect Pin 7 of P3001(REC C) to GND.

1. Record NTSC video signal in SP mode for few time and playback just recorded portion. And then place the unit in STILL mode.
2. Adjust VR3801 so that the through level and delay level at TP3002 becomes same level. (No Flicker on TV monitor)

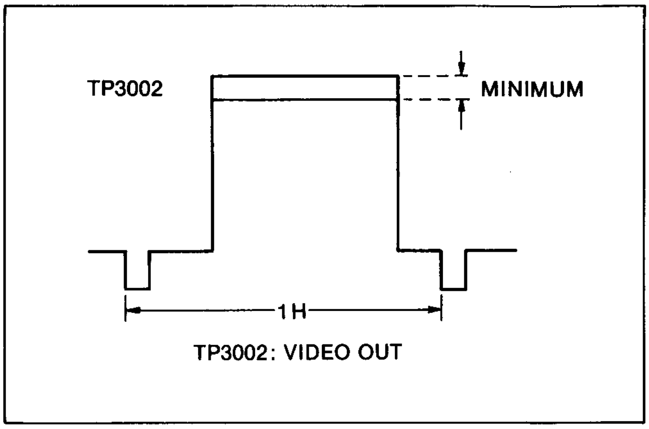


Fig. E16

11. 0.32H JUMP DELAY CHROMINANCE LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3802	SP (SELF RECORDED) STILL	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	CYAN FLICKER BECOMES MINIMUM	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		THROUGH	

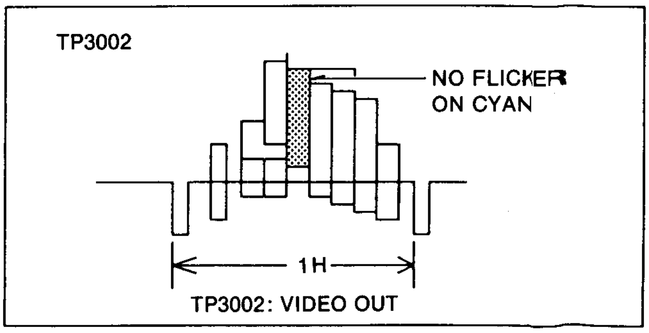


Fig. E17

1. Record NTSC colour bar in SP mode for few time and playback just recorded portion. And then place the unit in STILL mode.
2. Adjust VR3802 so that CYAN flicker at TP3002 becomes minimum. (No flicker on TV monitor)

12. S-VHS PILOT BURST BLANKING PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002 TP8007	VR8007	PLAYBACK	
TAPE	**M. EQ.**	**SPEC.**	
S-VHS PAL PRERECORDED TAPE	OSCILLO-SCOPE	T=0.2±0.2μsec	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

1. Playback S–VHS PAL prerecorded tape.
2. Adjust VR8007 so that the phase relation between TP3002 and TP8007 becomes 0.2+–02usec.

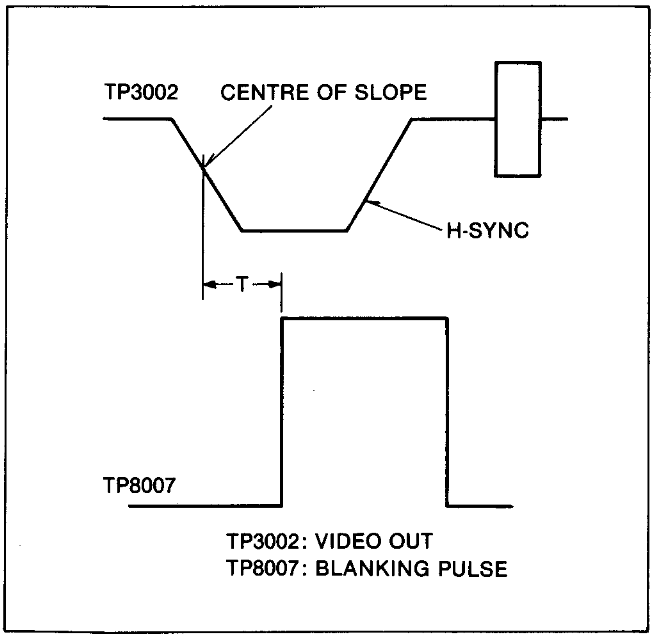


Fig. E18

13. MUTING FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3901	VR3902	STOP	NO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	15.680±0.05kHz	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

Note:

Make muting frequency amp as show in Fig. E19 before this adjustment.

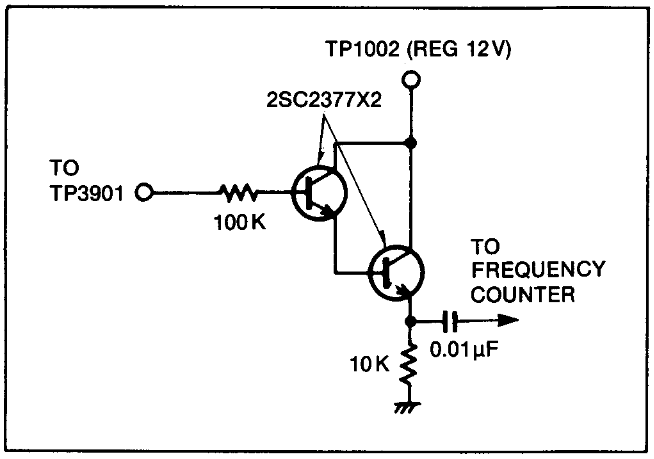


Fig. E19

1. Connect muting frequency amp between unit (TP3401) and Frequency counter.
2. Adjust VR3902 so that muting frequency at TP3901 becomes 15.680+–0.05KHz.

14. PLAYBACK LEVEL ADJUSTMENT 1

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR8002 (NTSC) VR8011 (PAL-M)	SP (SELF RECORDED) PLAYBACK	NTSC/PAL-M COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	CYAN LEVEL NTSC: 0.4±0.05Vp-p CYAN LEVEL PAL-M: 0.5±0.05Vp-p	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC/PAL-M		THROUGH	

Note:
1. VIDEO out should be terminated by 75 ohm.
2. When Adjust PAL–M, playback tape select SW on rear side should be PAL–M position.

1. Set the TV SYSTEM SW for NTSC, and record NTSC colour bar for few time in SP mode.
2. Playback the just recorded portion and adjust VR8002 so that Cyan level at VIDEO out becomes 0.4+–0.05Vp–p.
3. Set the TV SYSTEM SW for PAL–M, and record PAL–M colour bar for few time in SP mode.
4. Playback the just recorded portion and adjust VR8011 so that Cyan level at VIDEO out becomes 0.5+–0.05Vp–p.

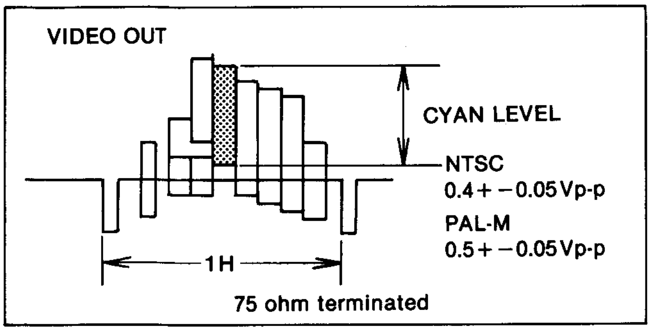

VIDEO OUT
CYAN LEVEL
NTSC
0.4+−0.05Vp-p
PAL-M
0.5+−0.05Vp-p
1H
75 ohm terminated

Fig. E20

15. PLAYBACK LEVEL ADJUSTMENT 2

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR8001 (PAL) VR8003 (SECAM)	SP (SELF RECORDED) PLAYBACK	PAL/SECAM COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	CYAN LEVEL PAL: 0.55±0.05Vp-p MAGNET LEVEL SECAM: 0.21±0.035Vp-p	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL/SECAM		THROUGH	

Note:
VIDEO out should be terminated by 75 ohm.

1. Set the TV SYSTEM SW for PAL, and record the PAL colour bar for few time in SP mode.
2. Playback the just recorded portion and adjust VR8001 so that Cyan level at VIDEO out becomes 0.55+−0.05Vp−p.
3. Set the TV SYSTEM SW for SECAM, and record the SECAM colour bar for few time in SP mode.
4. Playback the just recorded portion and adjust VR8003 so that Magenta level at VIDEO out becomes 0.21+−0.035Vp−p.

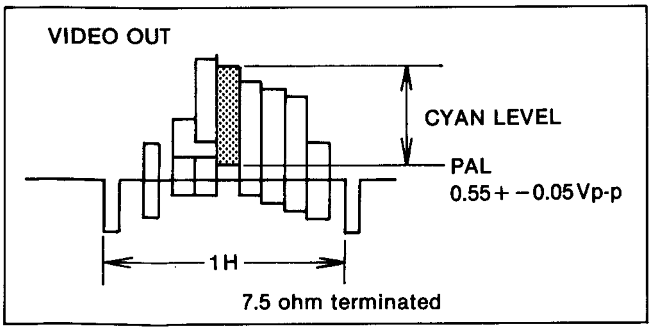

VIDEO OUT
CYAN LEVEL
PAL
0.55+−0.05Vp-p
1H
7.5 ohm terminated

Fig. E21

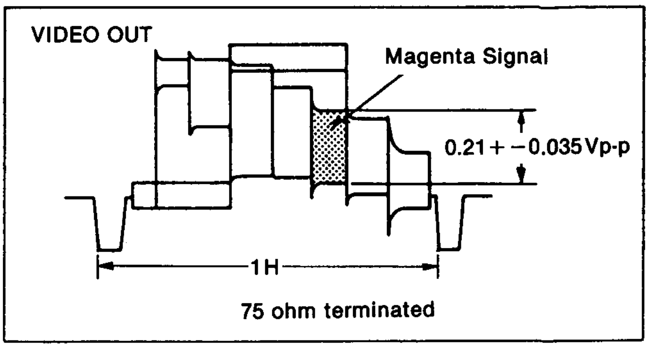

VIDEO OUT
Magenta Signal
0.21+−0.035Vp-p
1H
75 ohm terminated

Fig. E22

AUDIO SECTION

1. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (+) TP4003 (−)	VR4002	SP RECORDING	NO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M	2.9±0.1mVrms	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

Note:
Connect Pin 1, 2 and 3 of P3502 and also connect Pin 15, 16, 18 of PP3001 before this adjustment.

1. Adjust VR4002 so that level of TP4002 becomes 2.9+−0.1mVrms.

2. LEVEL METER SENSITIVITY ADJUSTMENT

TP	ADJ.	MODE	INPUT
ON THE LEVEL METER	VR4004	STOP	1kHz –10dB SINE WAVE TO AUDIO IN
TAPE	**M. EQ.**	**SPEC.**	
	SINE WAVE GENELATOR	0dB INDICATOR JUST LIGHTS UP	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

Note:
Before this adjustment, AUDIO out level should be 400Vrms adjusting by VR.

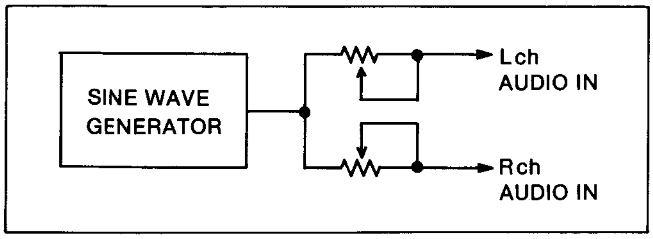


Fig. E23

1. Set the Audio mode for STEREO.
2. Adjust VR4004 so that 0dB segments (R) and (L) just light up.
3. Confirm another mode (L), (R) and NORMAL also lights up 0dB segments.

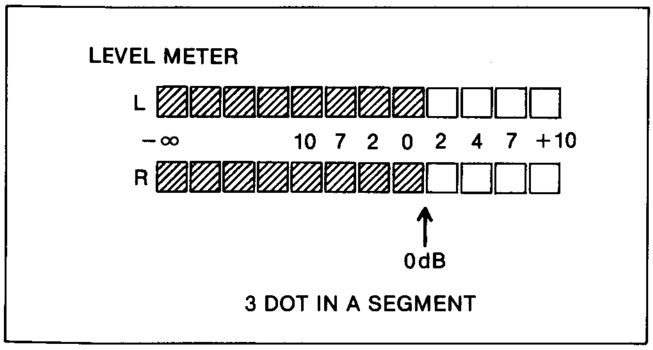


Fig. E24

3. HEAD SWITCHING ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4502	VR4510 (NTSC) VR4520 (PAL)	PLAYBACK	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE (PAL/NTSC) (Hi-Fi POSITION)	OSCILLO-SCOPE	NO ENVELOPE CLACK AT JOINT PORTION	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

Note:
1. Before this adjustment, PG shifter adjustment should be adjusted completed.
2. Playback PORTION "2" when using VFM8080HQFP (NTSC) or VFM8180HADH (PAL).

1. PLAYBACK NTSC alignment tape (Hi–Fi sound)
2. Adjust VR4510 so that envelope at TP4502 becomes no clack at L ch and R ch connecting portion.
3. PLAYBACK PAL alignment tape (Hi–Fi sound)
4. Adjust VR4520 so that envelope at TP4502 becomes no clack at L ch and R ch connecting portion.

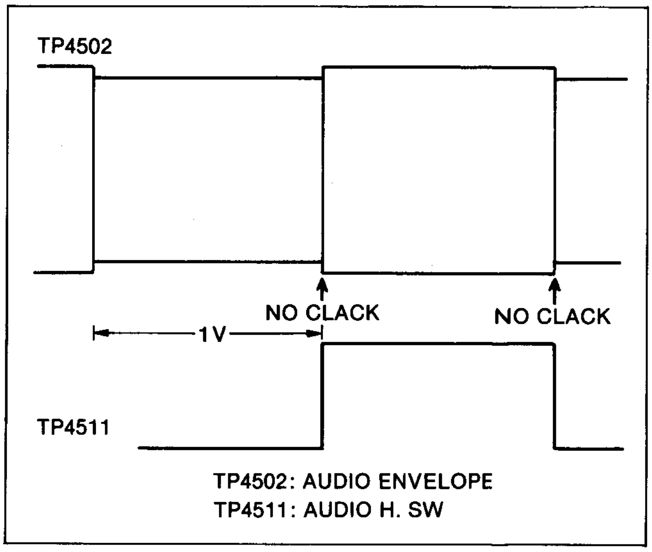


Fig. E25

4. CARRIER FREQUENCY (fo) ADJUSTMENT

TP	ADJ.	MODE	INPUT
(R) BETWEEN C4516 AND R4513 (L) BETWEEN C4566 AND R4563	VR4501 (NTSC-L) VR4509 (NTSC-R) VR4551 (PAL-L) VR4552 (PAL-R)	SP RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	NTSC-L: 1.3MHz±3kHz NTSC-R: 1.7MHz±3kHz PAL-L: 1.4MHz±3kHz PAL-R: 1.3MHz±3kHz	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC/PAL		THROUGH	

1. Set the TV SYSTEM SW for NTSC and place the unit in SP RECORDING mode.
2. Adjust VR4501 (NTSC–L ch) so that the fo becomes 1.3MHz and adjust VR4509 (NTSC–R ch) so that the fo becomes 1.7MHz+–3K Hz.
3. Set the TV SYSTEM SW for PAL and place the unit in SP RECORDING mode.
4. Adjust VR4551 (PAL–L ch) so that the fo becomes 1.4MHz+–3KHz and adjust so that the fo becomes 1.8MHz+–3KHz.

5. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
AUDIO OUT	VR4502 (L CH) VR4507 (R CH)	SP RECORDING/ PLAYBACK	1kHz −10dBV SINE WAVE TO AUDIO IN
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M	PLAYBACK LEVEL BECOMES SAME AS E-E LEVEL	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

Note:

Before this adjustment, AUDIO out level should be 400mVrms by adjusting VR as shown in Fig. E26.

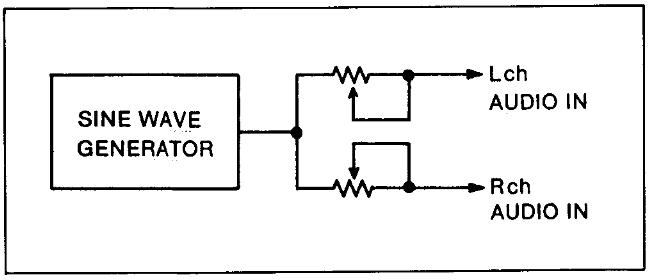


Fig. E26

1. Place the unit in SP RECORDING mode.
2. Adjust VR4502 (L ch) and VR4507 (R ch) so that playback level equalize to E–E level.

ANALOGUE SECTION

1. AFC FREE RUN (1) ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2	VR9518	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	16±0.05[kHz]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

1. Connect the jumper wire between TP1 and GND.
2. Connect the frequency counter to TP2 and adjust VR9518 so that the reading of frequency counter becomes 16+–0.05KHz.

2. AFC FREE RUN (2) ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4	VR9904	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	16±0.05[kHz]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

1. Connect the capacitor (10uF) between TP3 and GND.
2. Connect the frequency counter to TP4 and adjust VR9904 so that the reading of frequency counter becomes 1.+–0.05KHz.

3. AFC FREE RUN (3) ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP5	VR9401	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	15625±50[Hz]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		THROUGH	

1. Connect the jumper wire between TP40 and GND.
2. Connect the frequency counter to TP5 and adjust VR9401 so that the reading of frequency counter becomes 15625+–50Hz.

4. 50Hz VERTICAL SEPARATION FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7	VR9903	STOP	
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	45±1[Hz]	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
PAL		THROUGH	

1. Connect the jumper wire between TP6 and GND.
2. Connect the frequency counter to TP7 and adjust VR9903 so that the reading of frequency counter becomes 45+−1Hz.

5. 60Hz VERTICAL SEPARATION FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP7	VR9902	STOP	
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	55±1[Hz]	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
NTSC		THROUGH	

1. Connect the jumper wire between TP6 and GND.
2. Connect the frequency counter to TP7 and adjust VR9902 so that the reading of frequency counter becomes 55+−1Hz.

6. A/D LUMINANCE LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP8	VR9501	STOP	PAL COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	1.1±0.05[Vp-p]	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
PAL		THROUGH	

1. Input PAL colour bar to VIDEO IN.
2. Connect the oscilloscope to TP8.
3. Adjust VR9501 so that the luminance level becomes 1.1+−0.05Vp−p.

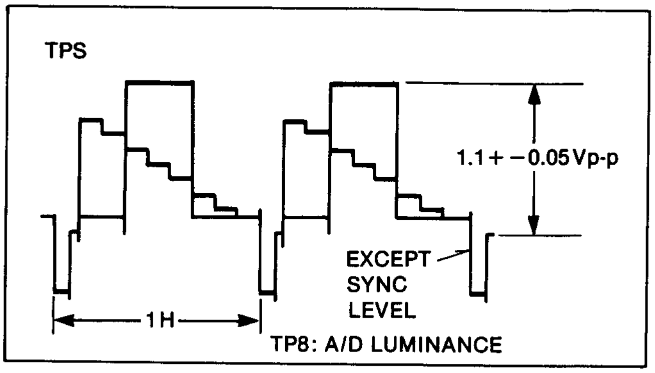


Fig. E27

7. DIGITAL PICTURE LOCATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP9 TP8	VR9512	STOP	NTSC COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	Tw=3.2±0.1[μsec]	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
NTSC		THROUGH	

1. Input NTSC colour bar to VIDEO IN.
2. Connect the oscilloscope CH−1 to TP8 and CH−2 to TP9.
3. Adjust VR9512 so that the phase rerlation between TP8 and TP9 becomes 3.2+−0.1usec as shown Fig. E

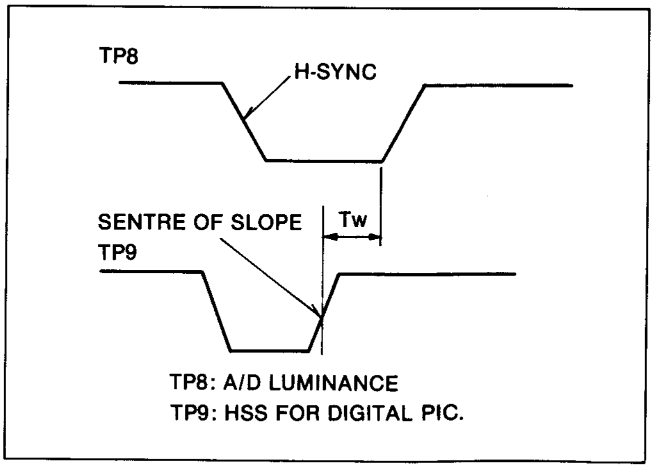


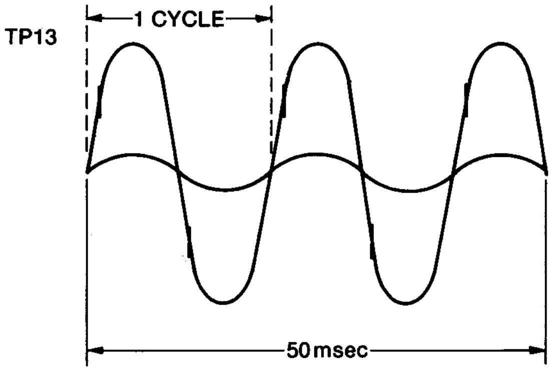
Fig. E28

8. NTSC DECODER FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	C9655	STOP	NTSC COLOUR RASTER
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	WITHIN 2.5 CYCLE ON 50msec	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		THROUGH	

Note:
10:1 probe should be used during this adjustment.

1. Connect jumper wire among TP14, TP31 and GND.
2. Connect oscilloscope to TP13 and input NTSC colour raster to VIDEO IN.
3. Adjust C9655 so that the wave cycle becomes within 2.5 on 50msec.



WITHIN 2.5 CYCLE
(USE 5msec/div FOR TIME)

TP13: A/D B-Y

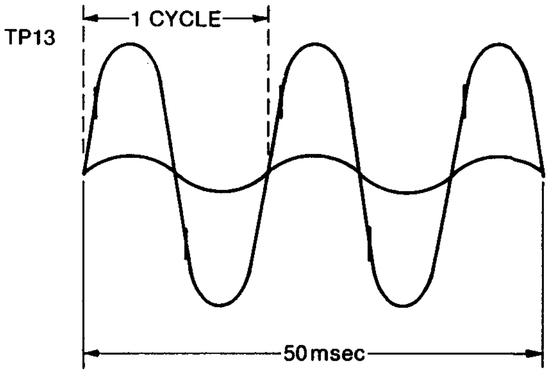
Fig. E29

9. PAL DECODER FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	C9656	STOP	PAL COLOUR RASTER
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	WITHIN 2.5 CYCLE ON 50msec	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

Note:
10:1 probe should be used during this adjustment.

1. Connect jumper wire among TP14, TP31 and GND.
2. Connect oscilloscope to TP13 and input PAL colour raster to VIDEO IN.
3. Adjust C9656 so that the wave cycle becomes within 2.5 on 50msec.



WITHIN 2.5 CYCLE
(USE 5msec/div FOR TIME)

TP13: A/D B-Y

Fig. E30

10. PAL-M DECODER FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	C9657	STOP	PAL-M COLOUR RASTER
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	WITHIN 2.5 CYCLE ON 50msec	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR(OUTPUT)**	
PAL-M		THROUGH	

Note:
10:1 probe should be used during this adjustment.

1. Connect the jumper wire among TP14, TP31 and GND.
2. Connect the oscilloscope to TP13 and input PAL-M colour raster to VIDEO IN.
3. Adjust C9657 so that wave cycle becomes within 2.5 on 50msec.

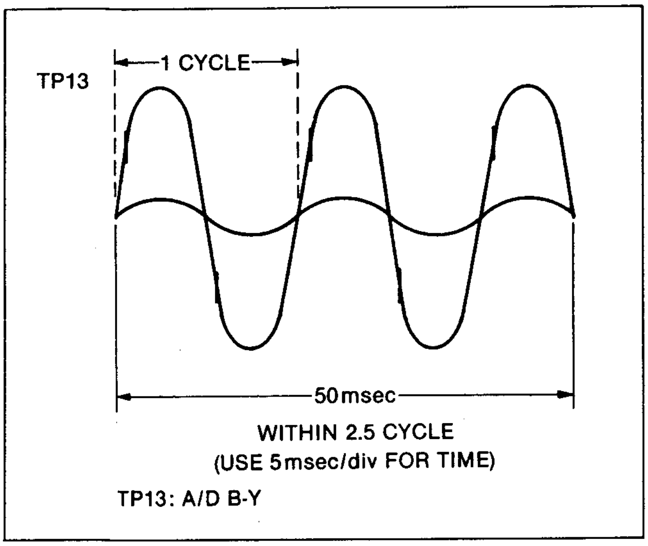


Fig. E31

11. PAL-N DECODER FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	C9658	STOP	PAL-N COLOUR RASTER
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	WITHIN 2.5 CYCLE ON 50msec	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL-N		THROUGH	

Note:

10:1 probe should be used during this adjustment.

1. Connect the jumper wire among TP14, TP31 and GND.
2. Connect the oscilloscope to TP13 and input PAL–N colour raster to VIDEO IN.
3. Adjust C9658 so that wave cycle becomes within 2.5 on 50msec.

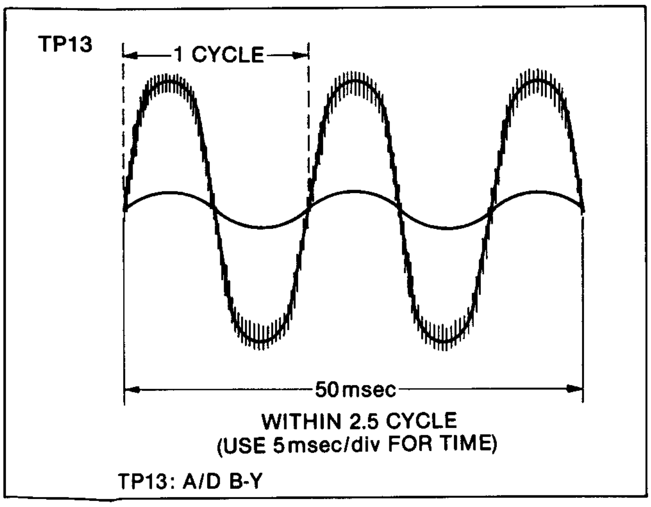


Fig. E32

12. PAL 1H DELAY CHROMA PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	L9530	STOP	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	FLICKER LEVE =LESS THAN 20mV	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

1. Input PAL colour bar to VIDEO IN.
2. Connect the oscilloscope to TP13 and trigger the scope with H–Rate of input video signal.
3. Adjust L9530 so that the flicker level becomes minimized as possible. (less than 20mV)

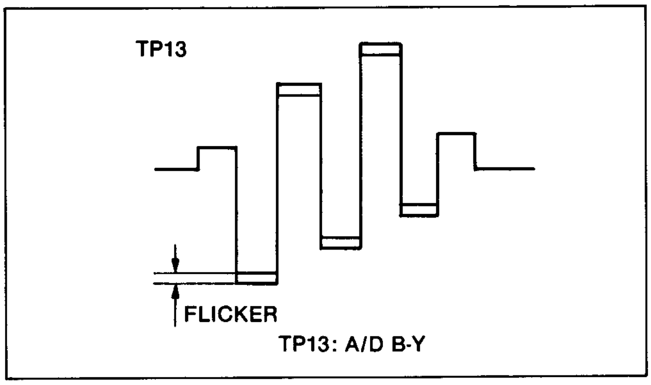


Fig. E33

13. PAL 1H DELEAY CHROMA GAIN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP12	VR9514	STOP	PAL COLUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	NO FLICKER AND MAXIMUM	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

1. Supply the PAL colour bar signal to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust VR9514 so that no flicker on waveform and then maximum as shown in Fig. E34.
4. After adjustment, confirm PAL 1H DELAY CHROMA ADJUSTMENT.

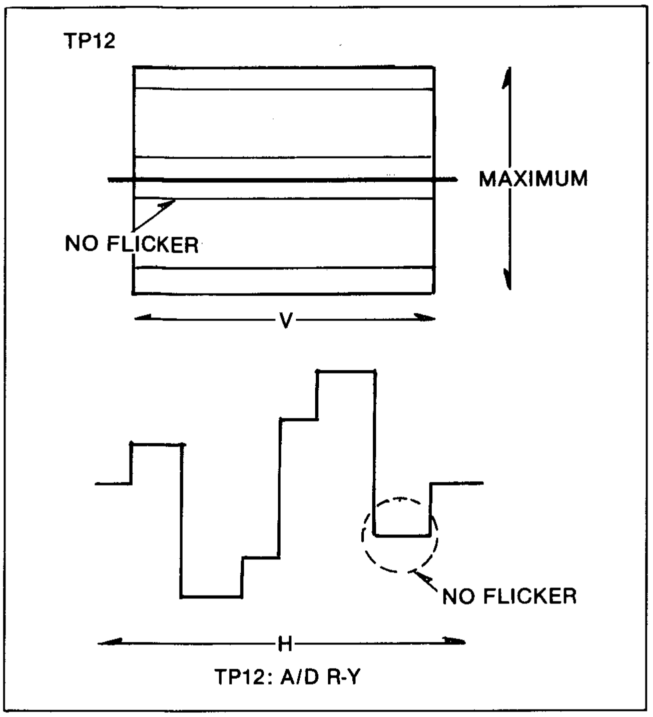

TP12
MAXIMUM
NO FLICKER
V
NO FLICKER
H
TP12: A/D R-Y

Fig E34

14. PAL-M 1H DELAY CHROMA PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	L9531	STOP	PAL-M COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	FLICKER LEVEL= LESS THAN 20mV	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL-M		THROUGH	

1. Input PAL−M colour bar to VIDEO IN.
2. Connect the oscilloscope to TP13 and trigger the scope with H−Rate of input video signal.
3. Adjust L9531 so that the flicker level becomes minimized as possible. (less than 20mV)

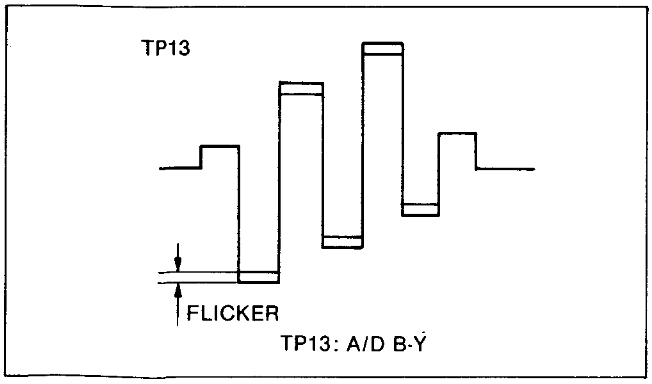

TP13
FLICKER
TP13: A/D B-Y

Fig. E35

15. PAL-M 1H DELAY CHROMA GAIN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP12	VR9516	STOP	PAL-M COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	NO FLICKER AND MAXIMUM	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL-M		THROUGH	

1. Supply the PAL−M colour bar signal to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust VR9516 so that no flicker on waveform and then maximun as shown in Fig E36.
4. After adjustment, confirm PAL−M 1H DELAY PHASE ADJUSTMENT.

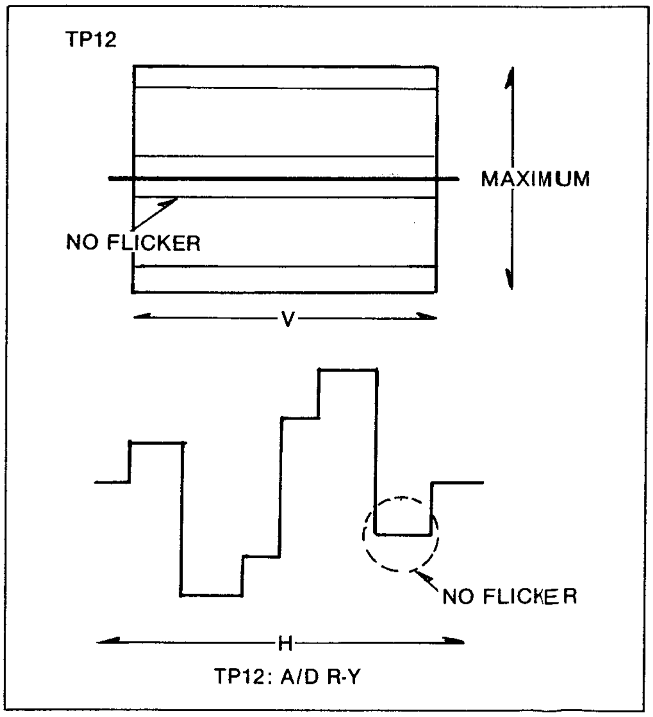

TP12
MAXIMUM
NO FLICKER
V
NO FLICKER
H
TP12: A/D R-Y

Fig. E36

16. PAL-N 1H DELAY CHROMA PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	L9532	STOP	PAL-N COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	FLICKER LEVEL= LESS THAN 20mV	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
PAL-N		THROUGH	

1. Supply the PAL–N colur bar signal to VIDEO IN.
2. Connect the oscilloscope to TP13 and trigger the scope with H–Rate of input video signal.
3. Adjsut L9532 so that the flicker level is minimized as possible. (less than 20mV)

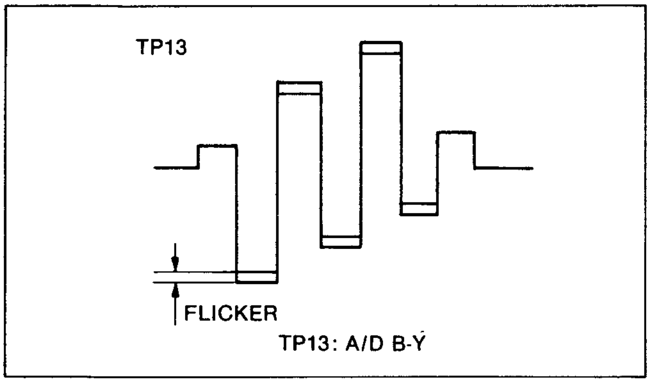


Fig. E37

17. PAL-N 1H DELAY CHROMA GAIN ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR9517	STOP	PAL-N COLOUR BAR
TAPE	M. EQ.	SPEC.	
	PAL-N VECTOR-SCOPE PAL-N MONITOR	NO FLICKER	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
PAL-N		THROUGH	

1. Supply the PAL–N colour bar signal to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust VR9517 so that no flicker on waveform and than maximum as shown in Fig. E38.
4. After adjustment, confirm PAL–N 1H DELAY PHASE ADJUSTMENT.

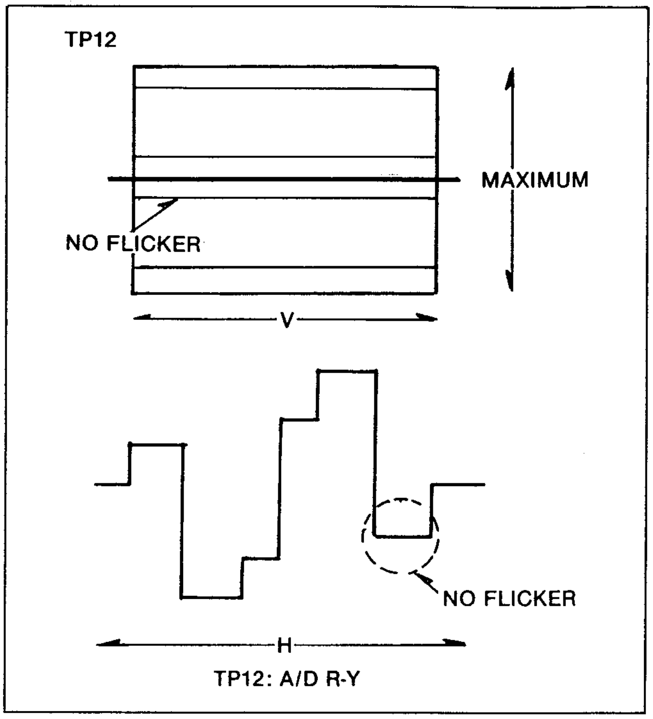


Fig. E38

18. SECAM CHROMA INPUT BELL FILTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP16	L9526	STOP	4.286MHz, 1Vp-p SINEWAVE SIGNAL
TAPE	M. EQ.	SPEC.	
	SIGNAL GENERATOR/ OSCILLO-SCOPE	MAXIMUM WAVE FORME	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
SECAM		THROUGH	

1. Set the output of signal generator to 4.286MHz, 1Vp–p and supply it through VIDEO IN.
2. Connect the oscilloscope to TP16.
3. Adjust L9526 so that the waveform level becomes maximum as possible.

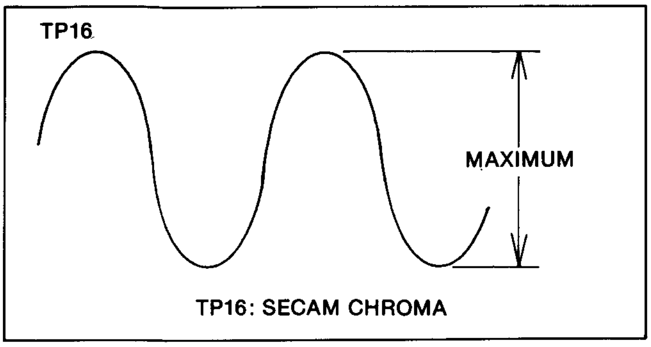

TP16
MAXIMUM
TP16: SECAM CHROMA

Fig. E39

19. SECAM ID LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP18	L9527	STOP	SECAM COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	MAXIMUM DC (MORE THAN 7V DC)	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Connect the oscilloscope to TP18.
2. Adjust L9527 so that the DC level becomes maximum. (more than 7V DC)

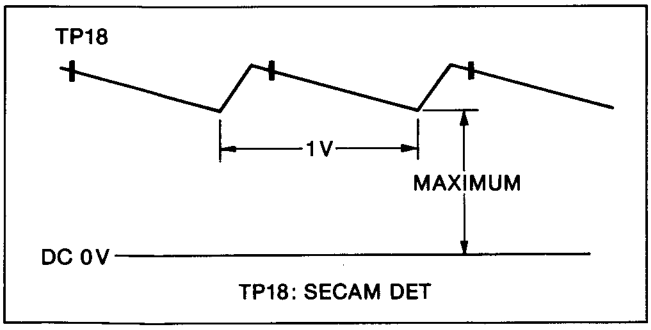

TP18
1V
MAXIMUM
DC 0V
TP18: SECAM DET

Fig. E40

20. SECAM R-Y PEDESTAL LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP12	L9529	STOP	SECAM DOT PATTERN (B/W WITH IDENT
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	FLAT WAVEFORM	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Input SECAM DOT PATTERN (with ident) to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust L9529 so that the waveform becomes to be flat.

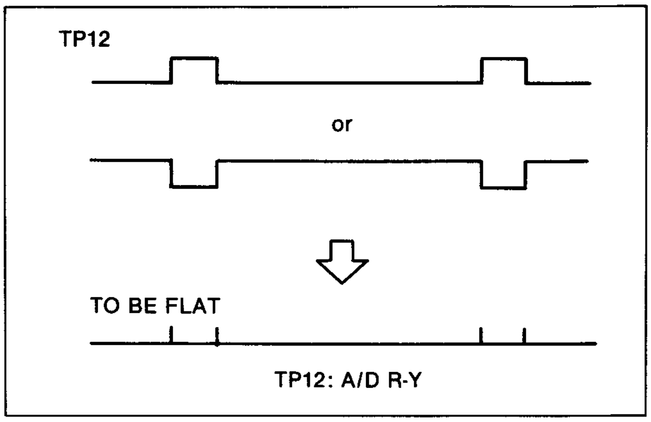

TP12
or
TO BE FLAT
TP12: A/D R-Y

Fig. E41

21. SECAM B-Y PEDESTAL LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	L9528	STOP	SECAM DOT PATTERN (B/W WITH IDENT)
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	FLAT WAVEFORM	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Input SECAM DOT PATTERN to VIDEO IN.
2. Connect the oscilloscope to TP13.
3. Adjust L9528 so that the waveform becomes to be flat.

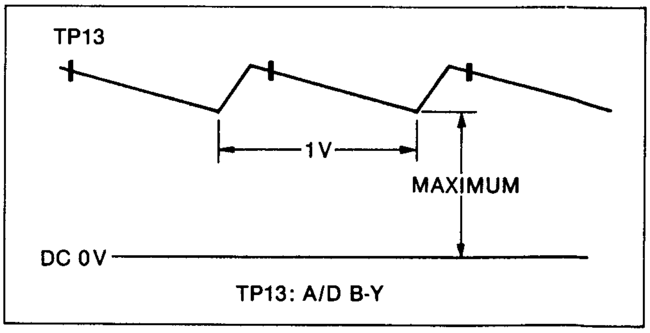

TP13
1V
MAXIMUM
DC 0V
TP13: A/D B-Y

Fig. E42

22. NTSC DECODER R-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP12	VR9503	STOP	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	A=0.8±0.04[Vp-p]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NSTC		THROUGH	

1. Input NTSC colour bar to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust VR9503 so that the A level becomes 0.8+−0.04Vp−p.

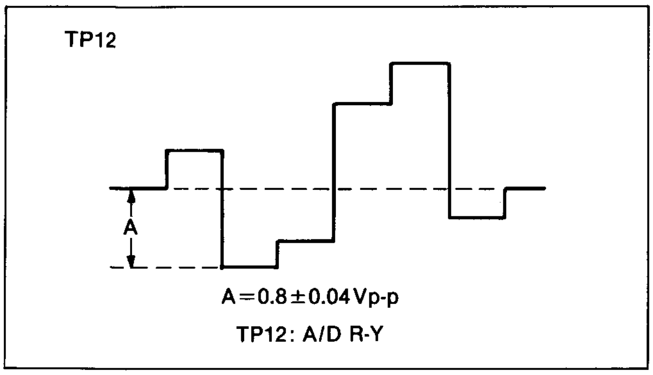


Fig. E44

23. NTSC DECODER B-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	VR9506	STOP	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	1.0±0.05[Vp-p]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		THROUGH	

1. Input NTSC colour bar to VIDEO IN.
2. Connect the oscilloscope to TP13.
3. Adjust VR9506 so that the waveform level becomes 1.0+−0.05Vp−p.

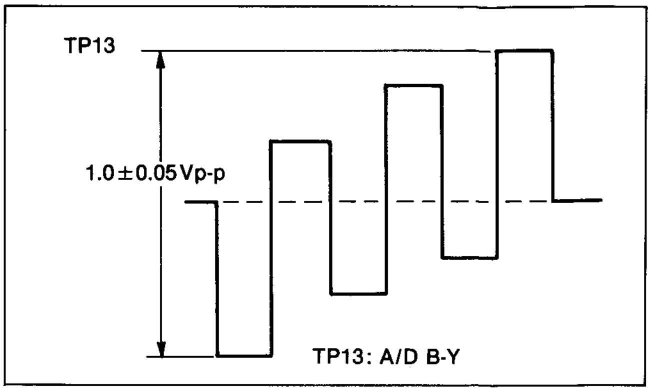


Fig. E45

24. PAL DECODER R-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP12	VR9505	STOP	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	A=0.8±0.04[Vp-p]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

1. Input PAL colour bar to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust VR9505 so that the A level becomes 0.8+−0.04Vp−p.

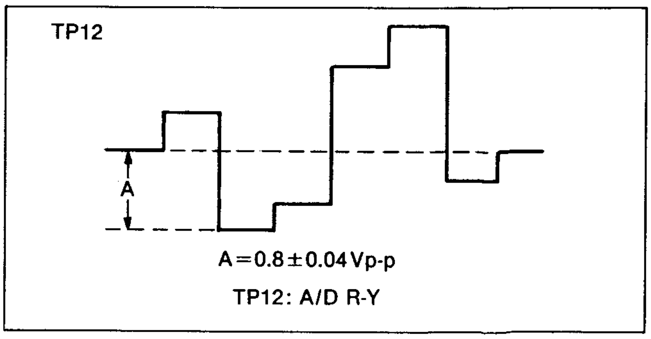


Fig. E46

25. PAL DECODER B-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	VR9508	STOP	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	1.0±0.05[Vp-p]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		THROUGH	

1. Input PAL colour bar to VIDEO IN.
2. Connect the oscilloscope to TP13.
3. Adjust VR9508 so that the waveform level becomes 1.0+−0.05Vp−p.

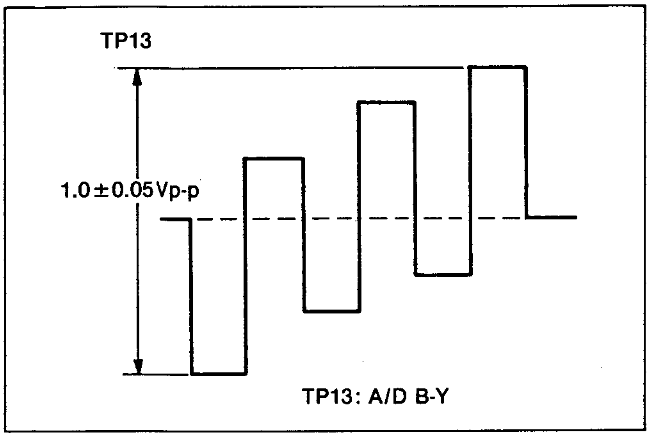


Fig. E47

26. SECAM DECODER R-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP12	VR9504	STOP	SECAM COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	A=0.8±0.04[Vp-p]	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
SECAM		THROUGH	

1. Input SECAM colour bar to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust VR9504 so that the A level becomes 0.8+−0.04Vp−p.

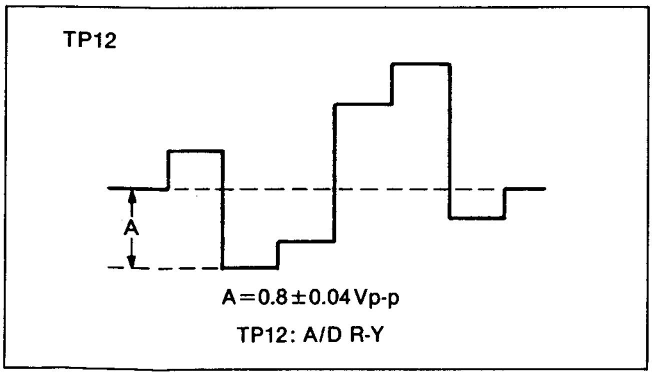


Fig. E48

27. SECAM DECODER B-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	VR9507	STOP	SECAM COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	1.0±0.05[Vp-p]	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
SECAM		THROUGH	

1. Input SECAM colour bar to VIDEO IN.
2. Connect the oscilloscope to TP13.
3. Adjust VR9507 so that the waveform level becomes 1.0+−0.05Vp−p.

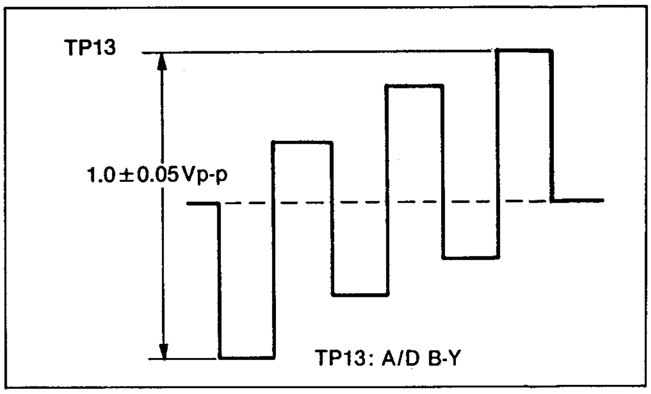


Fig. E49

28. PAL-M DECODER R-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP12	VR9521	STOP	PAL-M COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	A=0.8±0.04[Vp-p]	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
PAL-M		THROUGH	

1. Input PAL−M colour bar to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust VR9521 so that the A level becomes 0.8+−0.04Vp−p.

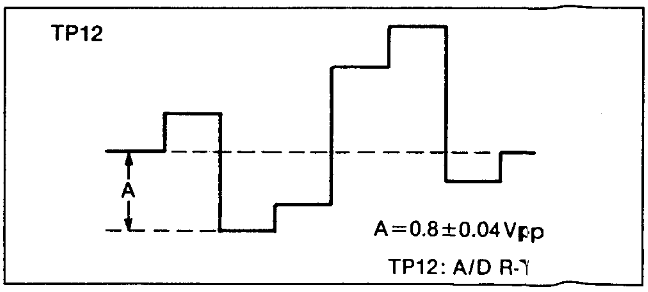


Fig. E50

29. PAL-M DECODER B-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	VR9519	STOP	PAL-M COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	1.0±0.05[Vp-p]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL-M		THROUGH	

1. Input PAL−M colour bar to VIDEO IN.
2. Connect the oscilloscope to TP13.
3. Adjust VR9519 so that the waveform level becomes 1.0+−0.05Vp−p.

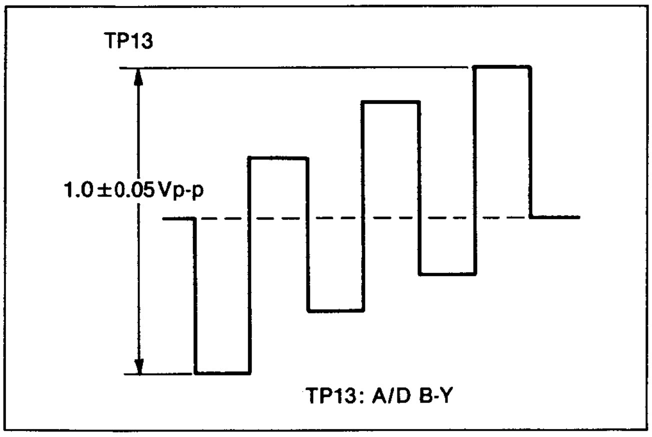


Fig. E51

30. PAL-N DECODER R-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP12	VR9522	STOP	PAL-N COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	A=0.8±0.04[Vp-p]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL-N		THROUGH	

1. Input PAL−N colour bar to VIDEO IN.
2. Connect the oscilloscope to TP12.
3. Adjust VR9522 so that the A level becomes 0.8+−0.04Vp−p.

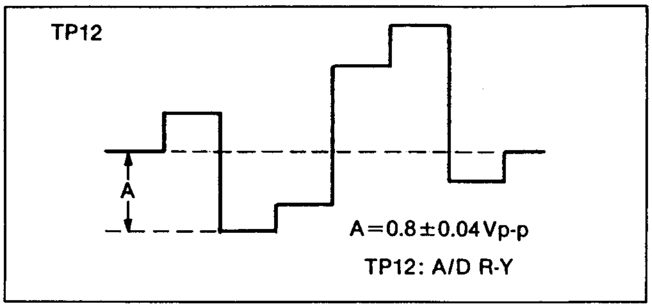


Fig. E52

31. PAL-N DECODER B-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP13	VR9520	STOP	PAL-N COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	1.0±0.05[Vp-p]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL-N		THROUGH	

1. Input PAL−N colour bar to VIDEO IN.
2. Connect the oscilloscope to TP13.
3. Adjust VR9520 so that the waveform level becomes 1.0+−0.05Vp−p.

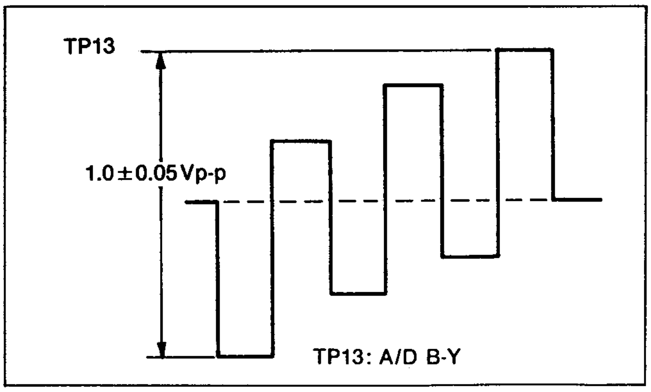


Fig. E53

32. SECAM ENCODER CONTROL VOLTAGE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP32	FL9402	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	VB=MORE THAN 2.1V DC VT=LESS THAN 3.4V DC VW=MORE THAN 0.5V	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Connect the oscilloscope to TP32.
2. Adjust FL9402 so that the DC voltage VB, VT and VW become within specification.

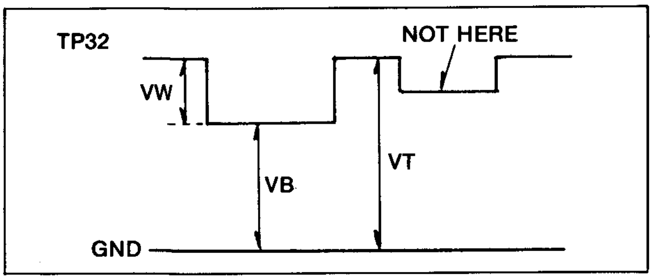


Fig. E54

33. SECAM CHROMA OUTPUT BELL FILTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP21	L9404	STOP	4.286MHz SINEWAVE SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
	SIGNAL GENERATOR/ FREQUENCY COUNTER	4.2860±0.01[MHz]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
SECAM		THROUGH	

1. Connect the capacitor (0.1uF) between TP19 and GND.
2. Supply the 4.286MHz Sinewave signal to TP20 via capacitor (0.1uF).
3. Set the signal generator so that the 1Vp–p Sinewave signal is obtained at TP20.
4. Adjust L9404 so that the the waveform level becomes minimized as possible.

34. NTSC ENCODER CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP11	C9351	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	3579545±50[Hz]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		NTSC	

1. Connect the frequency counter to TP11.
2. Adjust C9351 so that the reading of frequency counter becomes 3579545+–50Hz.

35. PAL ENCODER CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP11	C9350	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	4433619±50[Hz]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		PAL	

1. Connect the frequency counter to TP11.
2. Adjust C9350 so that the reading of frequency counter becomes 4433619+–50Hz.

36. PAL-M ENCODER CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP11	C9349	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	3575612±50[Hz]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		PAL-M	

1. Connect the frequency counter to TP11.
2. Adjust C9349 so that the reading of frequency counter becomes 3575612+–50Hz.

37. PAL-N ENCODER CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP11	C9348	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	3582056±50[Hz]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
		PAL-N	

1. Connect the frequency counter to TP11.
2. Adjust C9348 so that the reading of frequency counter becomes 3582056+–50Hz.

38. CCD OUTPUT LEVEL (1) ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP952 TP953	VR951	STOP	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	WHITE PEAK OF TP952 AND TP953 BECOME THE SAME LEVEL	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		PAL	

1. Input NTSC colour bar to VIDEO IN.
2. Connect the oscilloscope CH-1 to TP952 and CH-2 to TP951.
3. Adjust VR951 so that the waveforms CH1 and CH2 become the same level. (0+-20mV)

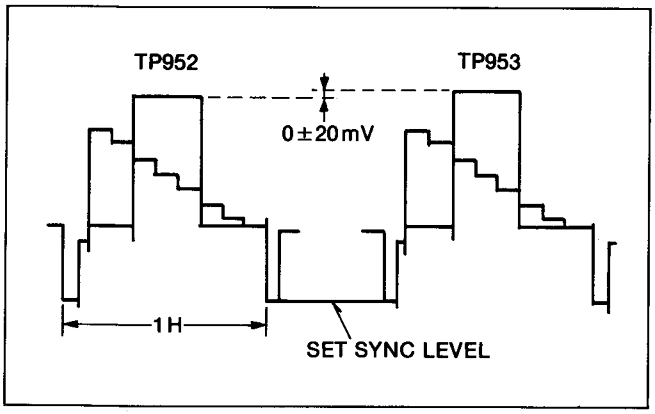


Fig. E55

39. ANALOG SWITCHING LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP951	VR953	STOP	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	A=0±10mV	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		PAL	

1. Supply the NTSC colour bar to VIDEO IN.
2. Connect the oscilloscope to TP951 and expand the sync portion triggering with H-Rate on the scope.
3. Adjust VR953 so that the difference (A) in level between even field and add field becomes minimized as possible. (A=0+-10mV)

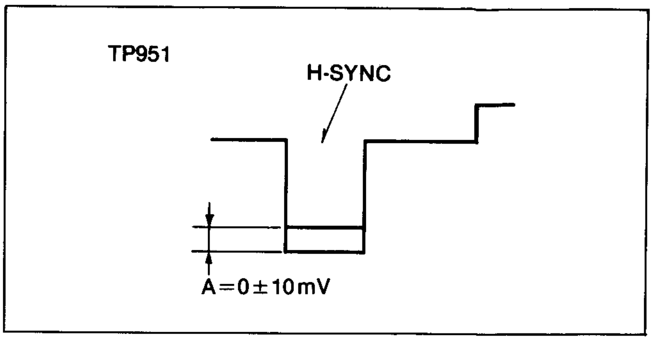


Fig. E56

40. CCD OUTPUT LEVEL (2) ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP8	VR952	STOP	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	A=0±10mV	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		PAL	

1. Input NTSC colour bar to VIDEO IN.
2. Connect the oscilloscope to TP8 through resistor(33Kohm) and expand the white portion triggering with H-Rate.
3. Adjust VR952 so that the difference (A) in level between even field and odd field becomes minimized as possible.(A=0+-10mV)

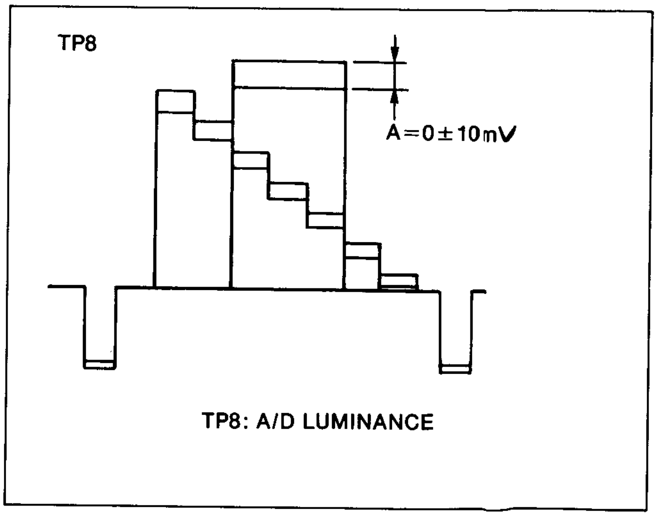


Fig. E57

41. D/A SYNC LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP22	VR9515	STOP	NTSC COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	A : B=(40±2) : 100	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
NTSC		PAL	

1. Input NTSC colour bar to VIDEO IN.
2. Connect the oscilloscope to TP22.
3. Adjust VR9515 so that the sync (A) and white (B) level ratio becomes 40+−2:100 as shown in Fig. E58.

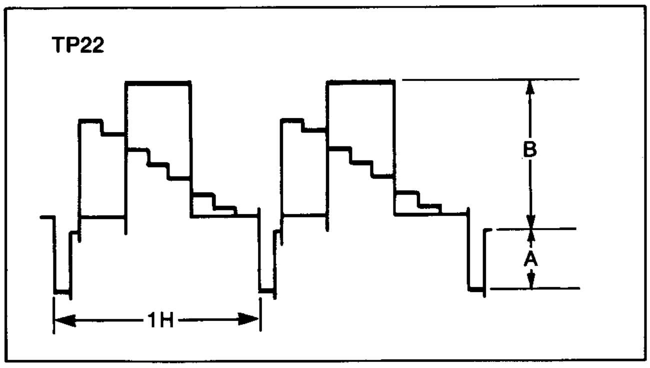


Fig. E58

42. DIGITAL THROUGH Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP22 TP23	VR9511	STOP	PAL COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	LESS THAN 20mV	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
PAL		NTSC	

Note:
Signal of TP22 and TP23 are unsynchronized, so trigger the scope with TP23 and overlap the signal of TP23 on signal of TP22.

1. Input PAL colour bar to VIDEO IN.
2. Connect the oscilloscope CH−1 to TP22 and CH−2 to TP23.
   And trigger the scope with TP23.
3. Adjust VR9511 so that the difference in level between CH−1 and CH−2 on the scope become minimized as possible. (less than 20mV)

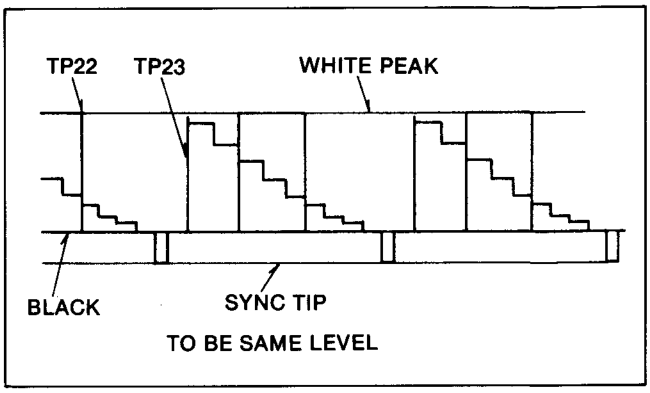


Fig. E59

43. TSC VIDEO OUTPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR9309	STOP	NTSC COLOUR BAR
TAPE	M. EQ.	SPEC.	
	OSCILLO-SCOPE	1.0±0.05Vp-p	
TV SYSTEM SW (INPUT)		TV SYSTEM SELECTOR (OUTPUT)	
NTSC		PAL	

Note:
Line output should be terminated by 75Oohm.

1. INput NTSC colour bar to VIDEO IN.
2. Connect the oscilloscope to VIDEO OUT.
3. Adjust VR9309 so that the waveform level is 1.0+−0.05Vp−p.

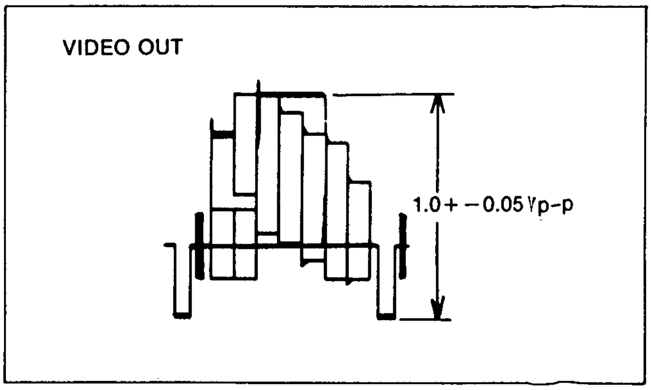


Fig. E60

44. WHITE BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR9301 VR9302	STOP	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	NTSC VECTOR-SCOPE	VECTORS MOVE TO CENTRE	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		NTSC	

Note:

Before adjustment, adjust HORIZONTAL and VERTICL VR so that spot comes centre.

1. Input PAL colour bar to VIDEO IN.
2. Connect the vectorscope to VIDEO OUT.
3. Adjust VR9301 and VR9302 mutually so that the vectors come to centre.

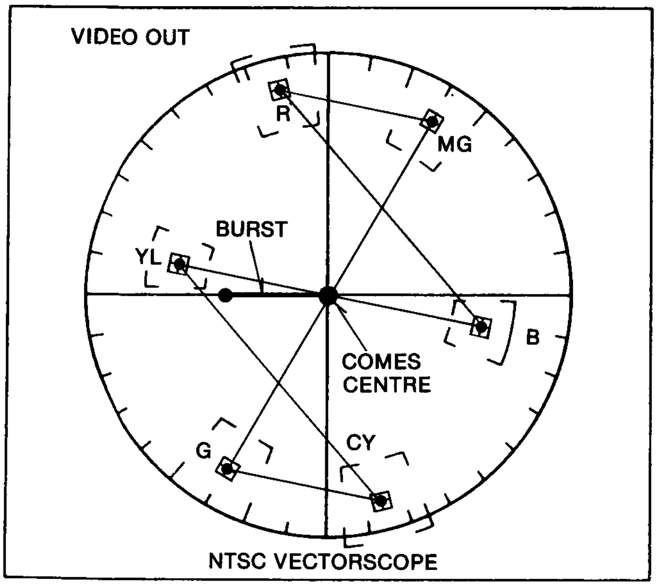


Fig. E61

45. D/A R-Y LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR9513	STOP	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	NTSC VECTOR-SCOPE	REFER TO FIGURE E62	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		NTSC	

Note:

Before adjustment, adjust PHASE and GAIN VR on vectorscope so that the BLUE and YELLOW vectors come to each standard frame.

1. Input PAL colour bar to VIDEO IN.
2. Connect the NTSC vectorscope to VIDEO OUT.
3. Adjust VR9513 so that the RED vector comes to standard frame on vectorscope.
4. Also MAGENTA, GREEN and CYAN vectors come to outside· frame.

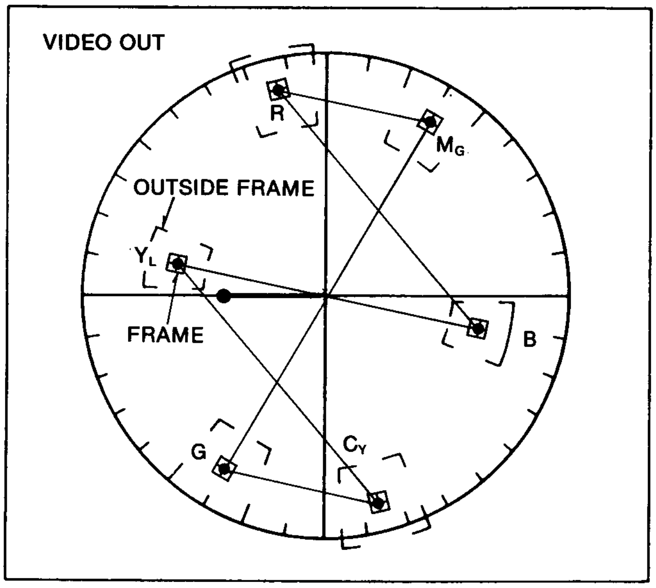


Fig. E62

46. PAL TO NTSC MODE COLOUR PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR9311 (CHROMA) VR9306 (TINT) VR9303 (BURST)	STOP	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	NTSC VECTOR-SCOPE	REFER TO FIGURE E63	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		NTSC	

Note:

Before adjustment, supply NTSC standard signal to vectorscope and adjust GAIN and PHASE VR so that burst vector comes correct position. (75%)

1. Input PAL colour bar to VIDEO IN.
2. Connect the NTSC vectorscope to VIDEO OUT.
3. Adjust VE9311 and VR9306 mutually so that the vectors red and yellow come to its colour frame in standard on the scope.
4. Adjust VR9303 so that the burst level becomes 75% on the scope.

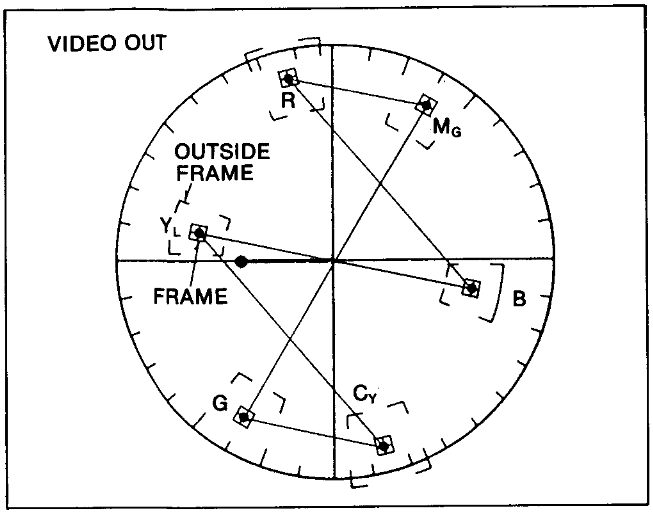


Fig. E63

47. DIGITAL THROUGH COLOUR PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	VR9509 (B-Y) VR9510 (R-Y)	STOP	PAL-M COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	NTSC VECTOR-SCOPE	REFER TO FIGURE E64	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL-M		NTSC	

Note:
Before adjustment, supply NTSC standard signal so that the burst vector comes correct position.

1. Input PAL−M colour bar to VIDEO IN.
2. Connect the NTSC vectorscope to VIDEO OUT.
3. Adjust VR9509 and VR9510 mutually so that the RED vector comes to standard frame on the scope.
4. Also another colour vectors come to our side frame on the scope.

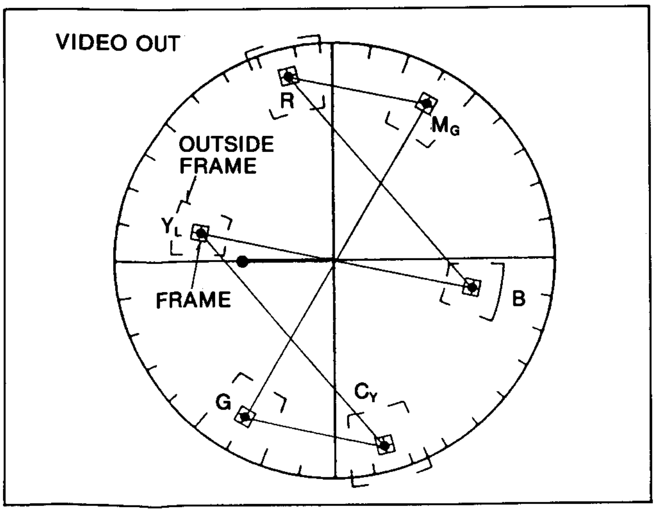


Fig. E64

48. SECAM CHROMA DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP30	VR9402 (B-Y) VR9403 (R-Y)	STOP	PAL COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	500±20[mV]	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
PAL		SECAM	

1. Input PAL colour bar to VIDEO IN.
2. Connect the oscilloscope to TP30.
3. Adjust VR9402 so that the deviation of B−Y IS 500+−20mV and adjust VR9403 so that the deviation of R−Y becomes 500+−20mV as well.

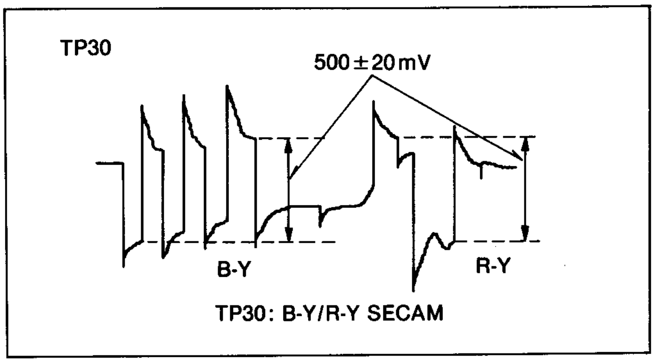


Fig. E65

49. NTSC TO PAL CHROMA PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR9505 (TINT) VR9510 (CHROMA)	STOP	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	PAL VECTOR-SCOPE	REFER TO FIGURE E66	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		PAL	

Note:
Before adjustment, supply PAL standard signal so that the burst vector comes to correct position.

1. Input NTSC colour bar to VIDEO IN.
2. Connect the PAL vectorscope to VIDEO OUT.
3. Adjust VR9505 and VR9510 so that the vector of red comes to its colour frame on the scope.
4. Another colours also come to outside frame.

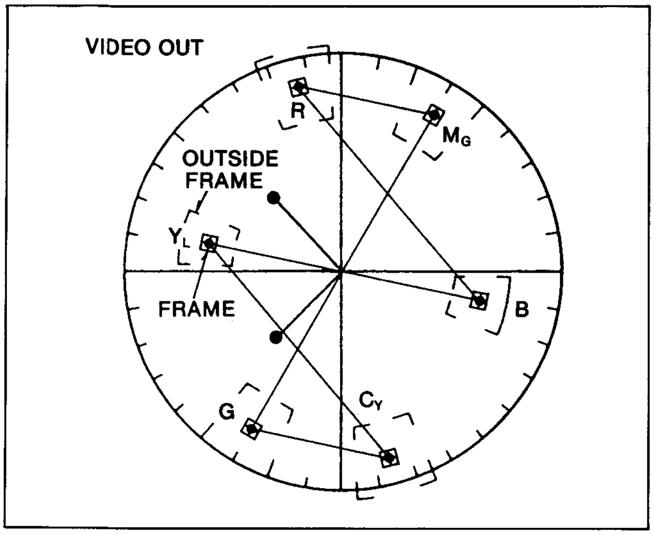


Fig. E66

50. PAL-N BURST PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR9308	SP (SELF RECORDED) PLAY	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	PAL-N VECTOR-SCOPE	REFER TO FIGURE E67	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		PAL-N	

Note:

Before adjustment, supply PAL−N signal so that the burst vector comes to correct position.

1. Input NTSC colour bar to VIDEO IN.
2. Connect PAL−N vectorscope to VIDEO OUT.
3. Adjust VR9308 so that the RED vector comes to its colour frame.
4. Another colour also comes to out side frame.

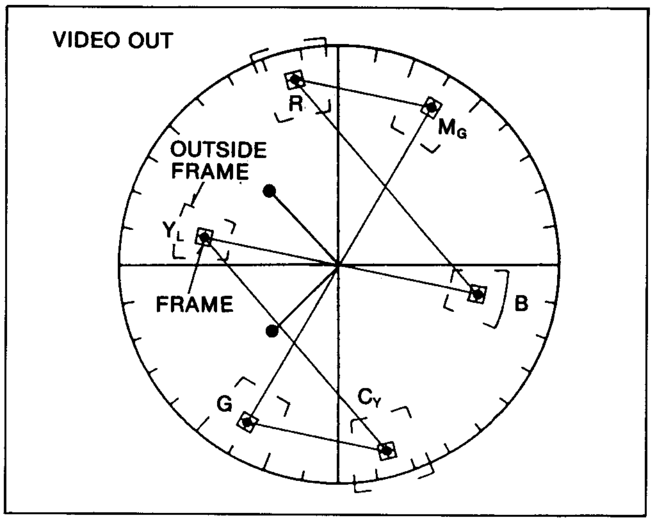


Fig. E67

51. PAL-M BURST PHASE ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR9307	STOP	NTSC COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	PAL-M VECTOR-SCOPE	REFER TO FIGURE E68	
TV SYSTEM SW (INPUT)		**TV SYSTEM SELECTOR (OUTPUT)**	
NTSC		PAL-M	

Note:

Before adjustment, supply PAL−M signal so that burst vector comes to correct position.

1. Input NTSC colour bar to VIDEO IN.
2. Connect PAL−M vectorscope to VIDEO OUT.
3. Adjust VR9307 so that the RED vector comes to its colour frame.
4. Another colour also comes to outside frame.

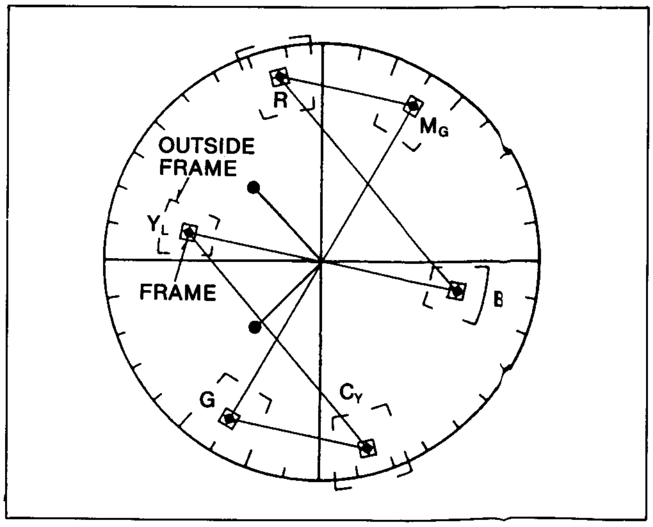
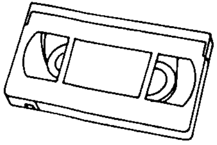
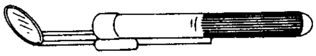
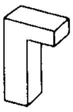
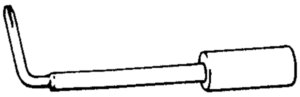
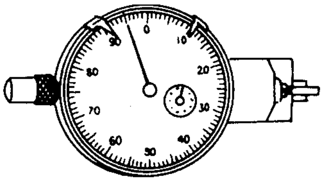
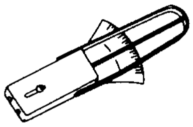
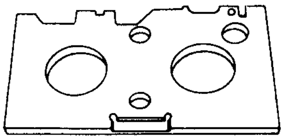
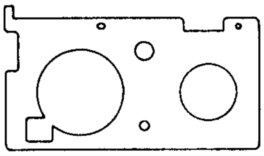
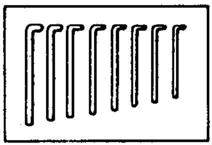
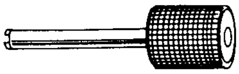
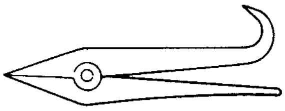
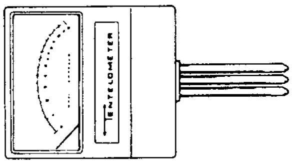
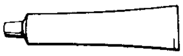
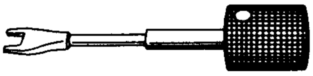
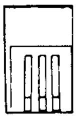
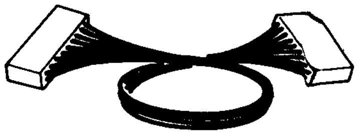
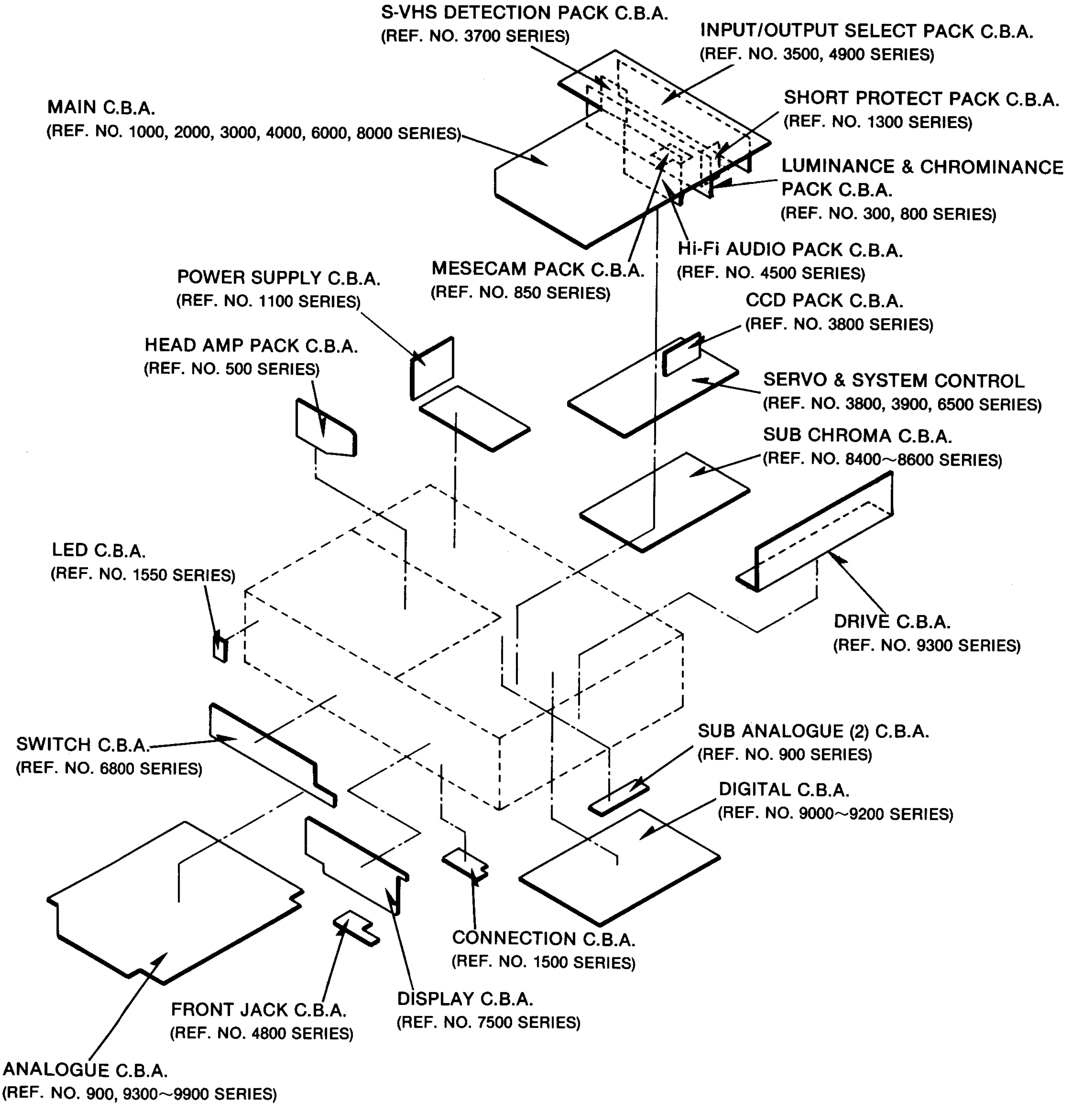


Fig. E68

SERVICING FIXTURES & TOOLS

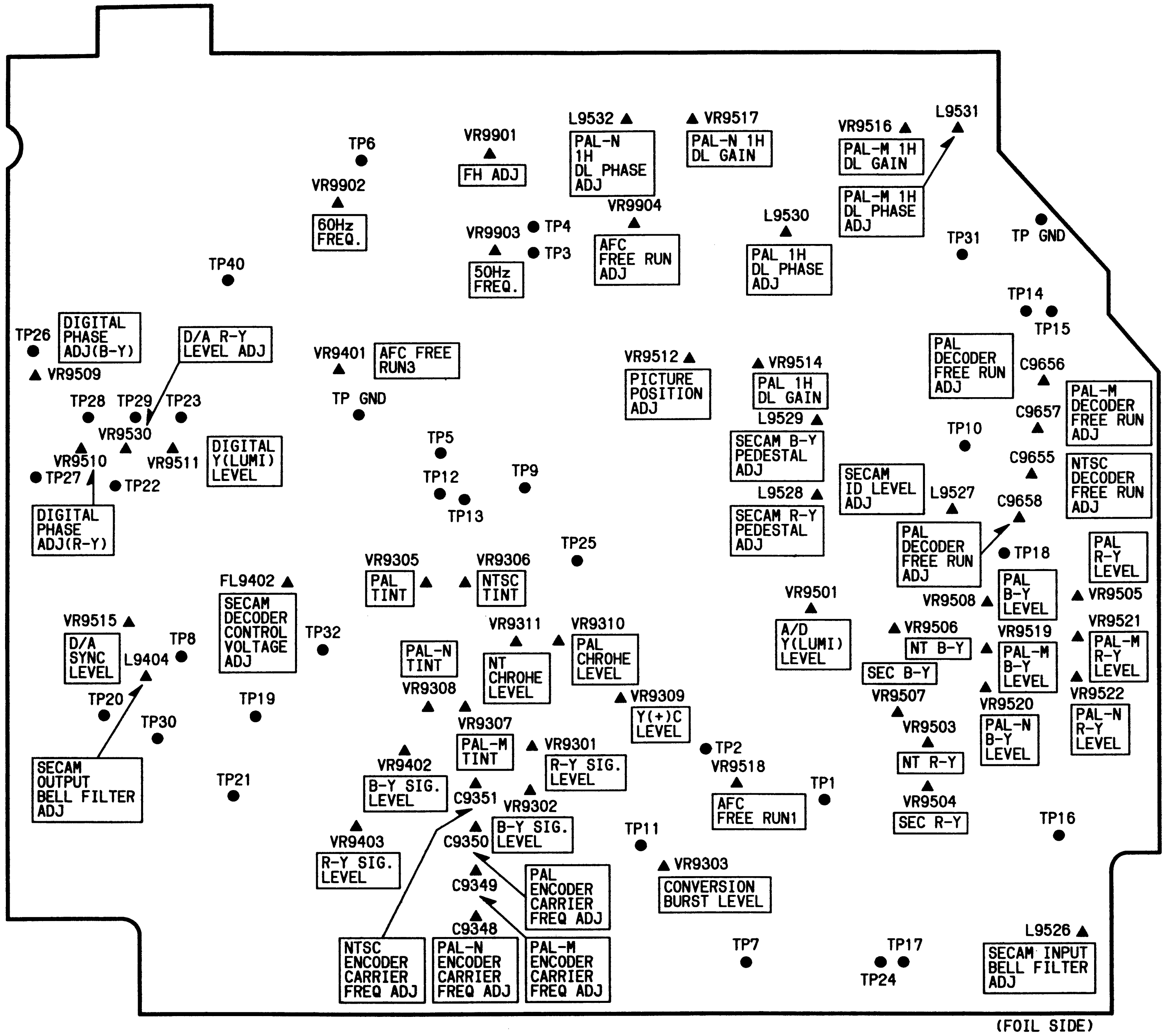
VFM8080HQFP (NTSC) VHS Alignment Tape **VFM8180HADH (PAL)** **VFJ8125H3F (PAL)** 	VFK0343 Check Light 	VFK0344 Post Height Adjustment Fixture (P1) 
VFK0269 L Type Screwdriver 	VFK0190 Reel Table Height Gauge 	VFK66 Fan Type Tension Gauge 
VFK0191 Post Adjustment Plate 	VFK0387 Tension Post Adj. Fixture 	VFK0326 Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0 mm) 
VFK0329 Post Adj. Screwdriver 	VFK0335 Retaining Ring Remover (3mm/4mm) 	VFK0132 Back Tension Meter (Tentelometer, Made in U.S.A.) 
MOR265 Morlytone Grease (Cam Gear, Slide Section, Hyper Pressure Sections etc.) 	VFK0328 H-Position Adj. Screwdriver 	VFK27 Head Cleaning Stick 
Cleaning Liquid (Alcohol) <Purchase Locally> (Tape Transport Rubber Parts etc.)	High Quality Machine Oil <Purchase Locally> (Reel Shaft, Capstan Shaft etc.)	VFK0681 18 PIN EXTENSION CABLE 

CIRCUIT BOARD LAYOUT

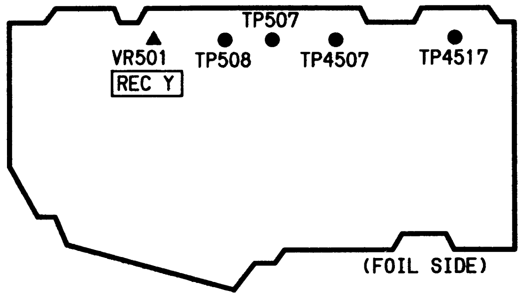

S-VHS DETECTION PACK C.B.A.
(REF. NO. 3700 SERIES)
INPUT/OUTPUT SELECT PACK C.B.A.
(REF. NO. 3500, 4900 SERIES)
MAIN C.B.A.
(REF. NO. 1000, 2000, 3000, 4000, 6000, 8000 SERIES)
SHORT PROTECT PACK C.B.A.
(REF. NO. 1300 SERIES)
LUMINANCE & CHROMINANCE PACK C.B.A.
(REF. NO. 300, 800 SERIES)
Hi-Fi AUDIO PACK C.B.A.
(REF. NO. 4500 SERIES)
MESECAM PACK C.B.A.
(REF. NO. 850 SERIES)
POWER SUPPLY C.B.A.
(REF. NO. 1100 SERIES)
CCD PACK C.B.A.
(REF. NO. 3800 SERIES)
HEAD AMP PACK C.B.A.
(REF. NO. 500 SERIES)
SERVO & SYSTEM CONTROL
(REF. NO. 3800, 3900, 6500 SERIES)
SUB CHROMA C.B.A.
(REF. NO. 8400~8600 SERIES)
LED C.B.A.
(REF. NO. 1550 SERIES)
DRIVE C.B.A.
(REF. NO. 9300 SERIES)
SUB ANALOGUE (2) C.B.A.
(REF. NO. 900 SERIES)
SWITCH C.B.A.
(REF. NO. 6800 SERIES)
DIGITAL C.B.A.
(REF. NO. 9000~9200 SERIES)
CONNECTION C.B.A.
(REF. NO. 1500 SERIES)
FRONT JACK C.B.A.
(REF. NO. 4800 SERIES)
DISPLAY C.B.A.
(REF. NO. 7500 SERIES)
ANALOGUE C.B.A.
(REF. NO. 900, 9300~9900 SERIES)

LOCATION OF TEST POINTS

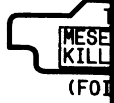
ANALOGUE C.B.A. (VEP03795A)


TP6
VR9901
FH ADJ
L9532
PAL-N 1H DL PHASE ADJ
VR9517
PAL-N 1H DL GAIN
VR9516
PAL-M 1H DL GAIN
L9531
PAL-M 1H DL PHASE ADJ
VR9902
60Hz FREQ.
VR9903
TP4
TP3
50Hz FREQ.
VR9904
AFC FREE RUN ADJ
L9530
PAL 1H DL PHASE ADJ
TP31
TP GND
TP40
TP14
TP15
TP26
DIGITAL PHASE ADJ(B-Y)
D/A R-Y LEVEL ADJ
VR9509
VR9401
AFC FREE RUN3
VR9512
PICTURE POSITION ADJ
VR9514
PAL 1H DL GAIN
PAL DECODER FREE RUN ADJ
C9656
PAL-M DECODER FREE RUN ADJ
TP28
TP29
TP23
TP GND
L9529
C9657
VR9530
TP10
VR9510
VR9511
DIGITAL Y(LUMI) LEVEL
TP5
SECAM B-Y PEDESTAL ADJ
C9655
NTSC DECODER FREE RUN ADJ
TP27
TP22
TP12
TP9
SECAM ID LEVEL ADJ
L9527
L9528
C9658
DIGITAL PHASE ADJ(R-Y)
TP13
SECAM R-Y PEDESTAL ADJ
PAL DECODER FREE RUN ADJ
PAL R-Y LEVEL
TP25
TP18
VR9305
VR9306
PAL TINT
NTSC TINT
FL9402
SECAM DECODER CONTROL VOLTAGE ADJ
VR9501
VR9508
PAL B-Y LEVEL
VR9505
VR9515
VR9311
VR9310
VR9506
VR9519
VR9521
TP8
TP32
D/A SYNC LEVEL
L9404
PAL-N TINT
NT CHROHE LEVEL
PAL CHROHE LEVEL
A/D Y(LUMI) LEVEL
NT B-Y
PAL-M B-Y LEVEL
PAL-M R-Y LEVEL
VR9308
SEC B-Y
VR9309
VR9507
VR9520
VR9522
TP20
TP19
Y(+)C LEVEL
PAL-N B-Y LEVEL
PAL-N R-Y LEVEL
TP30
VR9307
VR9503
PAL-M TINT
VR9301
TP2
VR9402
R-Y SIG. LEVEL
VR9518
SECAM OUTPUT BELL FILTER ADJ
NT R-Y
TP21
B-Y SIG. LEVEL
TP1
C9351
VR9302
AFC FREE RUN1
VR9504
SEC R-Y
VR9403
B-Y SIG. LEVEL
TP11
TP16
C9350
R-Y SIG. LEVEL
VR9303
PAL ENCODER CARRIER FREQ ADJ
C9349
CONVERSION BURST LEVEL
C9348
L9526
NTSC ENCODER CARRIER FREQ ADJ
PAL-N ENCODER CARRIER FREQ ADJ
PAL-M ENCODER CARRIER FREQ ADJ
TP7
TP17
TP24
SECAM INPUT BELL FILTER ADJ
(FOIL SIDE)

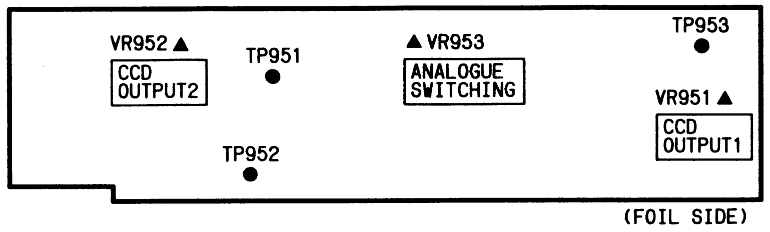
HEAD AMP C.B.A. (VEP05159A)

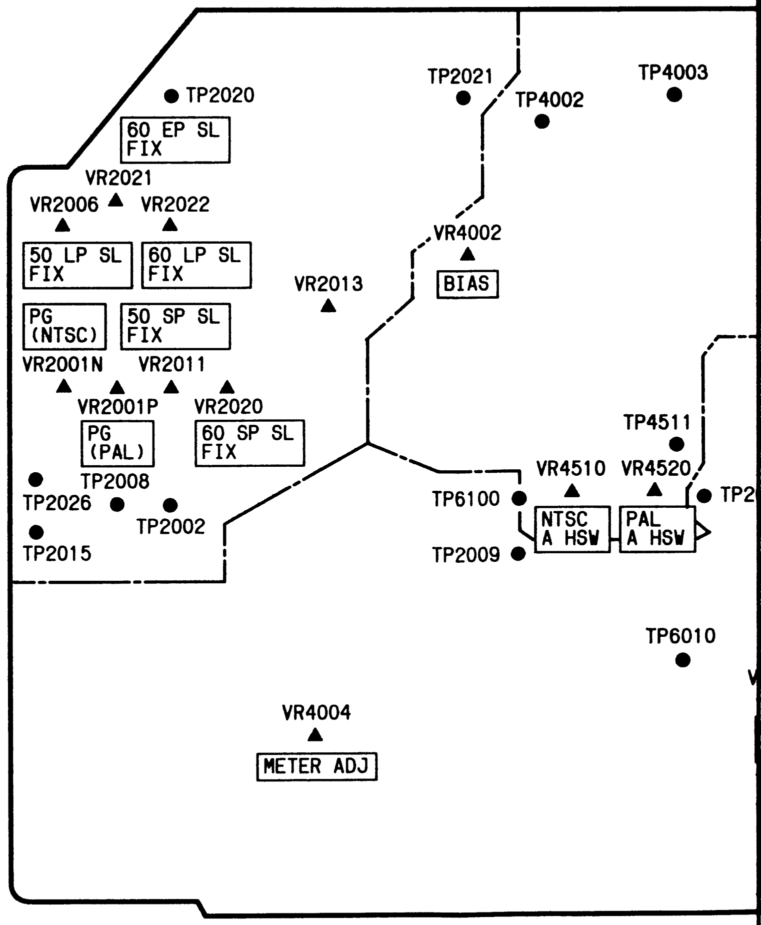

TP507
VR501
TP508
TP4507
TP4517
REC Y
(FOIL SIDE)

MESECAM
PACK C
(VEP03


MESE
KILL
(FOI

SUB ANALOGUE (2) C.B.A. (VEP00R01A)


VR952
CCD OUTPUT2
TP951
VR953
ANALOGUE SWITCHING
TP953
VR951
CCD OUTPUT1
TP952
(FOIL SIDE)

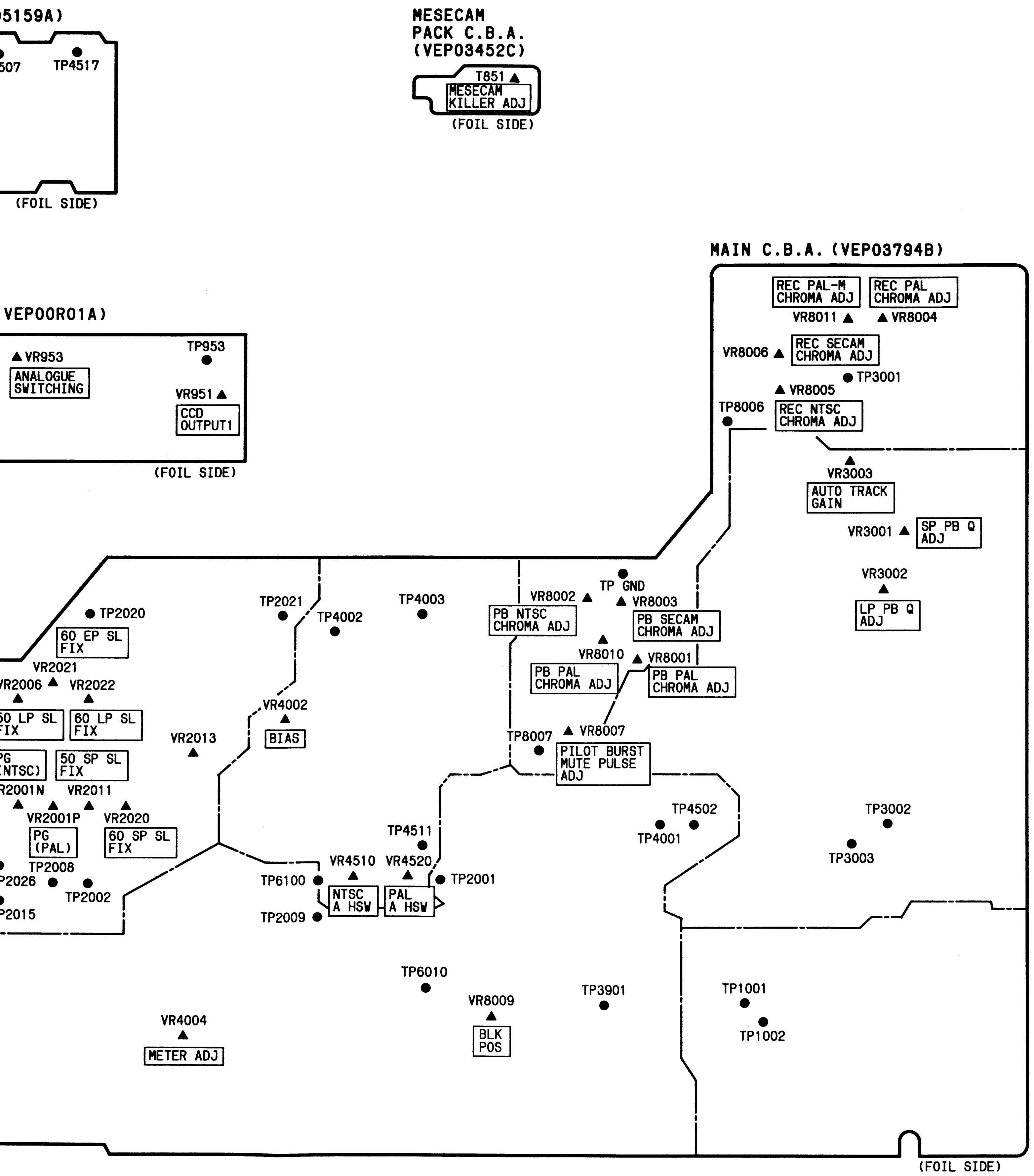

TP2020
TP2021
TP4002
TP4003
60 EP SL FIX
VR2021
VR2006
VR2022
VR4002
50 LP SL FIX
60 LP SL FIX
VR2013
BIAS
PG (NTSC)
50 SP SL FIX
VR2001N
VR2011
VR2001P
VR2020
PG (PAL)
60 SP SL FIX
TP4511
TP2008
VR4510
VR4520
TP2026
TP6100
TP2
TP2002
NTSC A HSW
PAL A HSW
TP2015
TP2009
TP6010
VR4004
METER ADJ

5159A)

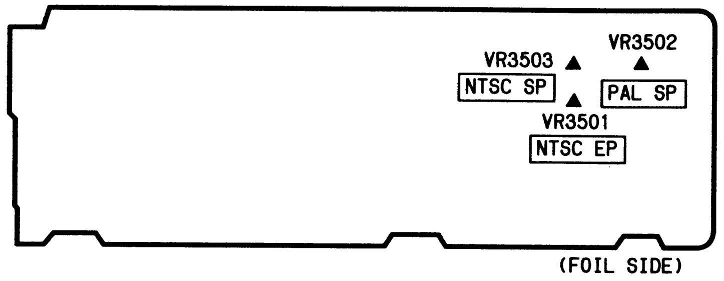
MESECAM PACK C.B.A. (VEP03452C)

VEP00R01A)

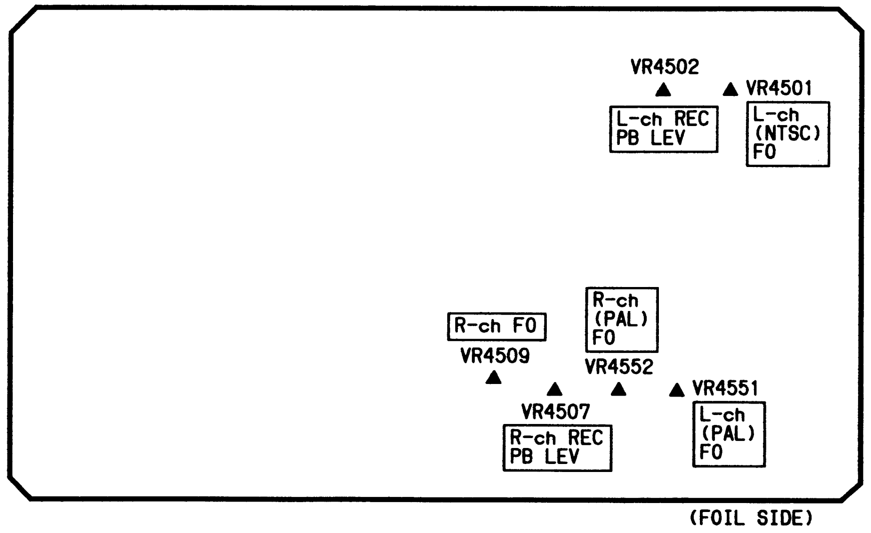
MAIN C.B.A. (VEP03794B)


507
TP4517
(FOIL SIDE)
T851
MESECAM KILLER ADJ
(FOIL SIDE)
VR953
ANALOGUE SWITCHING
TP953
VR951
CCD OUTPUT1
(FOIL SIDE)
REC PAL-M CHROMA ADJ
REC PAL CHROMA ADJ
VR8011
VR8004
VR8006
REC SECAM CHROMA ADJ
TP3001
VR8005
TP8006
REC NTSC CHROMA ADJ
VR3003
AUTO TRACK GAIN
VR3001
SP PB Q ADJ
VR3002
LP PB Q ADJ
TP2020
60 EP SL FIX
TP2021
TP4002
TP4003
PB NTSC CHROMA ADJ
VR8002
TP GND
VR8003
PB SECAM CHROMA ADJ
VR8010
VR8001
PB PAL CHROMA ADJ
PB PAL CHROMA ADJ
VR2021
VR2006
VR2022
50 LP SL FIX
60 LP SL FIX
VR4002
BIAS
VR2013
PG (NTSC)
50 SP SL FIX
TP8007
VR8007
PILOT BURST MUTE PULSE ADJ
R2001N
VR2011
VR2001P
VR2020
PG (PAL)
60 SP SL FIX
TP4511
TP4502
TP4001
TP3002
TP3003
TP2008
TP2026
TP2002
TP2015
VR4510
VR4520
TP6100
TP2001
NTSC A HSW
PAL A HSW
TP2009
TP6010
VR8009
BLK POS
TP3901
TP1001
TP1002
VR4004
METER ADJ
(FOIL SIDE)

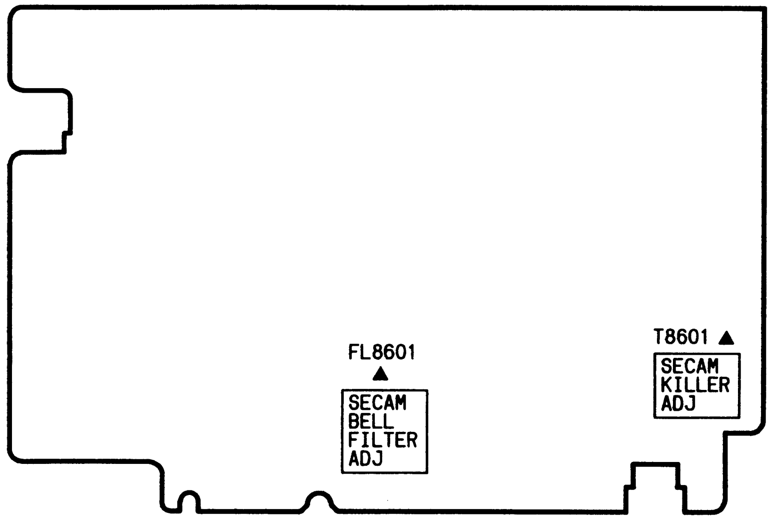
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04320A)


VR3503
VR3502
NTSC SP
PAL SP
VR3501
NTSC EP
(FOIL SIDE)

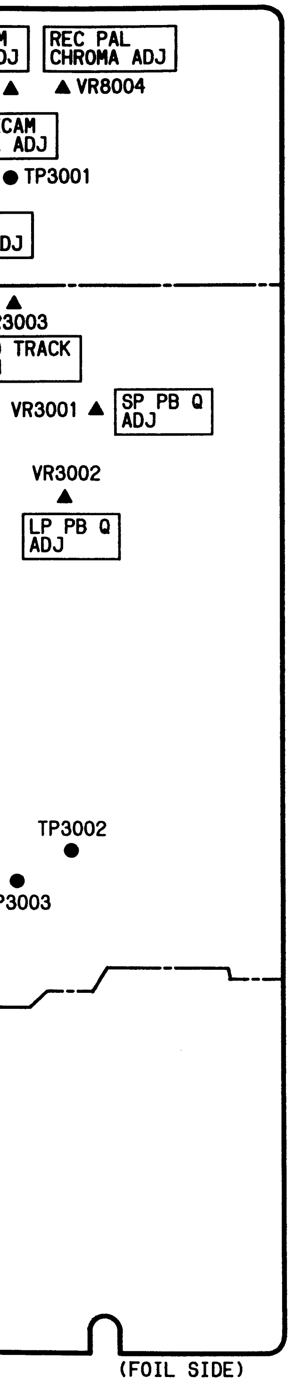
Hi-Fi AUDIO PACK C.B.A. (VEP04321A)


VR4502
VR4501
L-ch REC PB LEV
L-ch (NTSC) FO
R-ch FO
R-ch (PAL) FO
VR4509
VR4552
VR4551
VR4507
R-ch REC PB LEV
L-ch (PAL) FO
(FOIL SIDE)

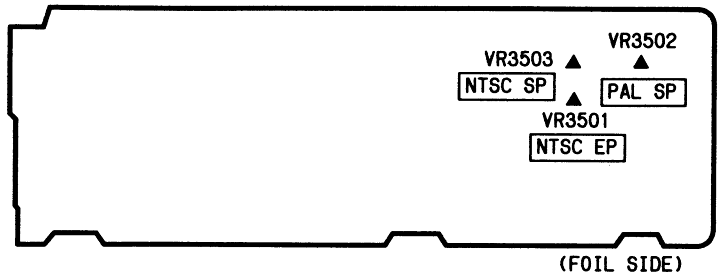
SUB CHROMA C.B.A. (VEP08139A)


FL8601
T8601
SECAM BELL FILTER ADJ
SECAM KILLER ADJ

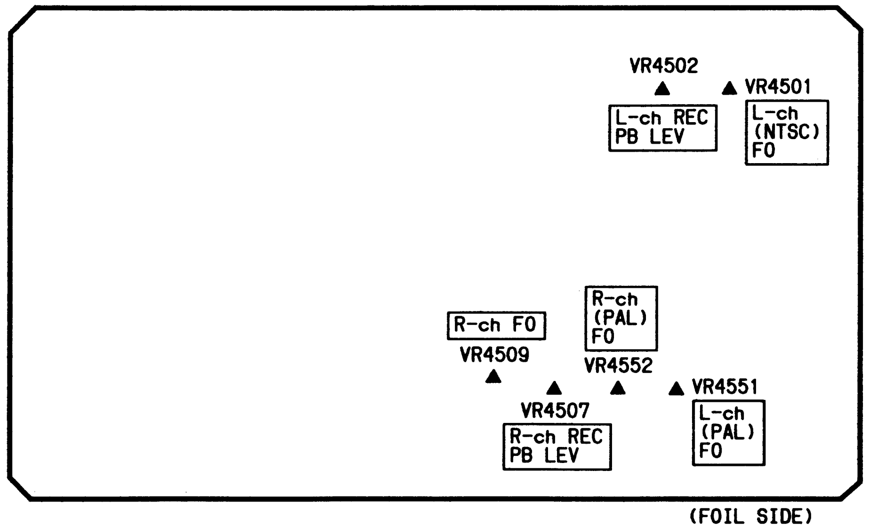
VEP03794B)


M
DJ
REC PAL CHROMA ADJ
VR8004
CAM ADJ
TP3001
DJ
3003
TRACK
VR3001
SP PB Q ADJ
VR3002
LP PB Q ADJ
TP3002
P3003
(FOIL SIDE)

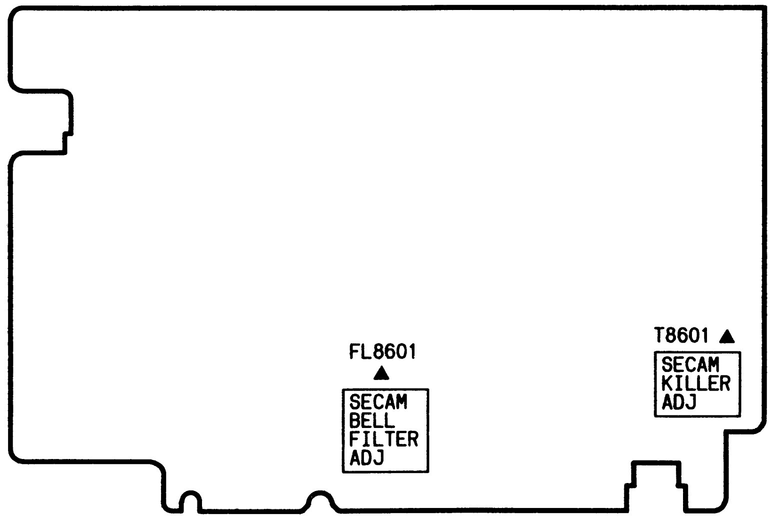
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04320A)


VR3503
NTSC SP
VR3502
PAL SP
VR3501
NTSC EP
(FOIL SIDE)

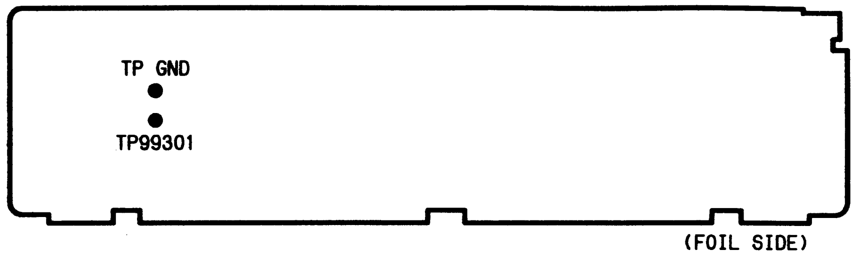
Hi-Fi AUDIO PACK C.B.A. (VEP04321A)


VR4502
VR4501
L-ch REC PB LEV
L-ch (NTSC) FO
R-ch FO
VR4509
R-ch (PAL) FO
VR4552
VR4551
VR4507
R-ch REC PB LEV
L-ch (PAL) FO
(FOIL SIDE)

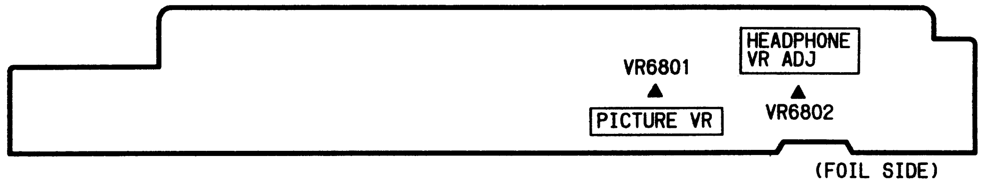
SUB CHROMA C.B.A. (VEP08139A)


FL8601
SECAM BELL FILTER ADJ
T8601
SECAM KILLER ADJ

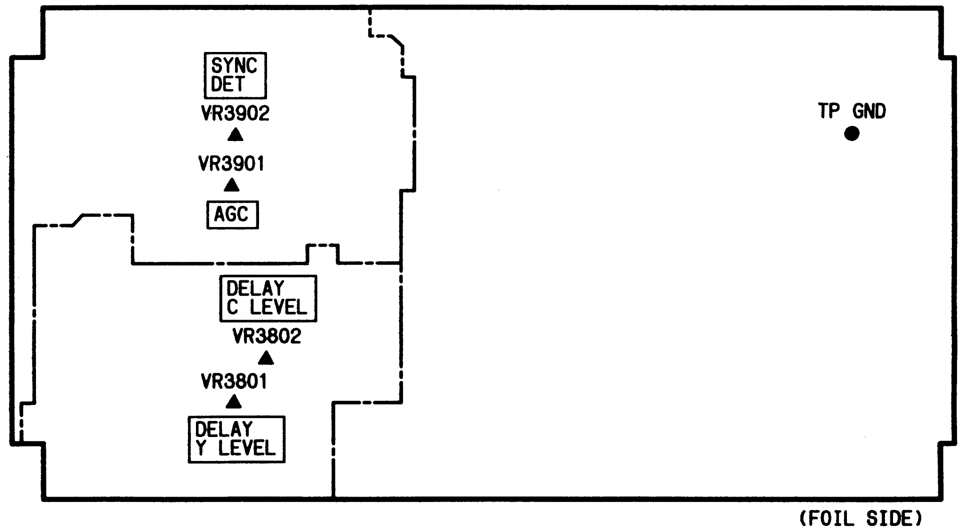
DRIVE C.B.A. (VEP06709A)


TP GND
TP99301
(FOIL SIDE)

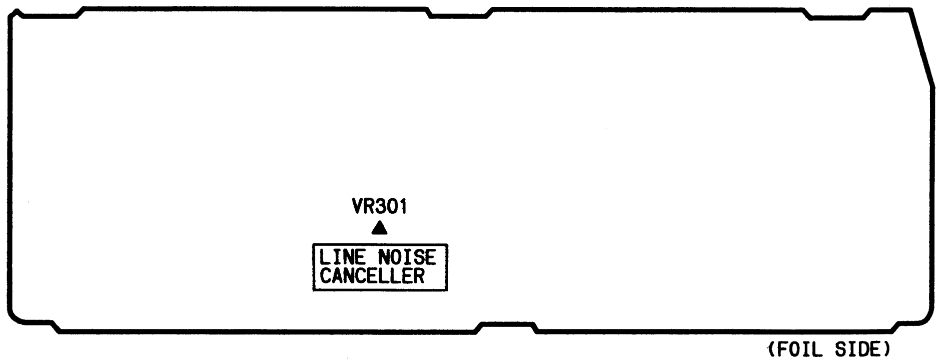
SWITCH C.B.A. (VEP06710B)


VR6801
PICTURE VR
HEADPHONE VR ADJ
VR6802
(FOIL SIDE)

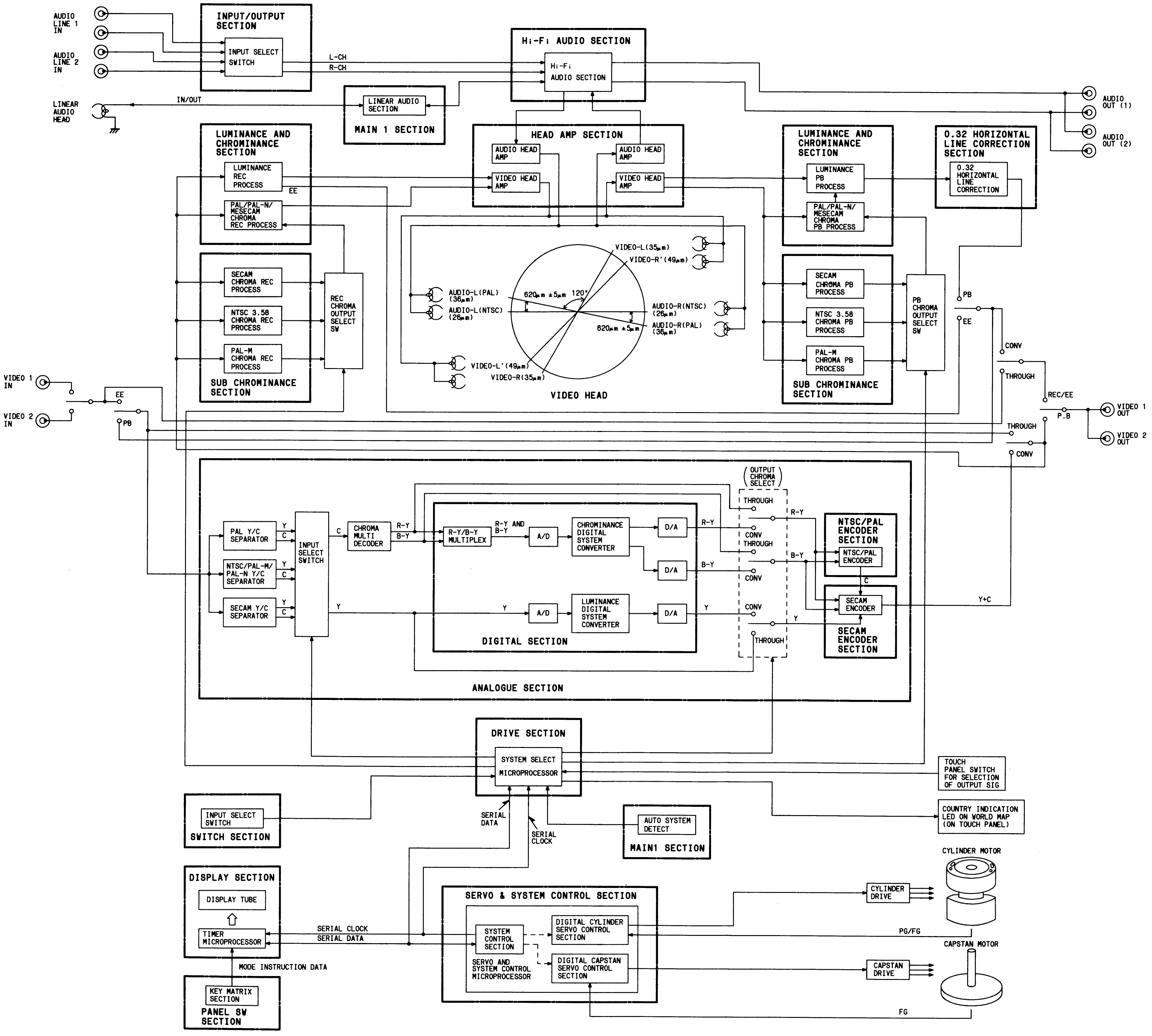
SERVO & SYSTEM CONTROL C.B.A. (VEP06711A)


SYNC DET
VR3902
VR3901
AGC
TP GND
DELAY C LEVEL
VR3802
VR3801
DELAY Y LEVEL
(FOIL SIDE)

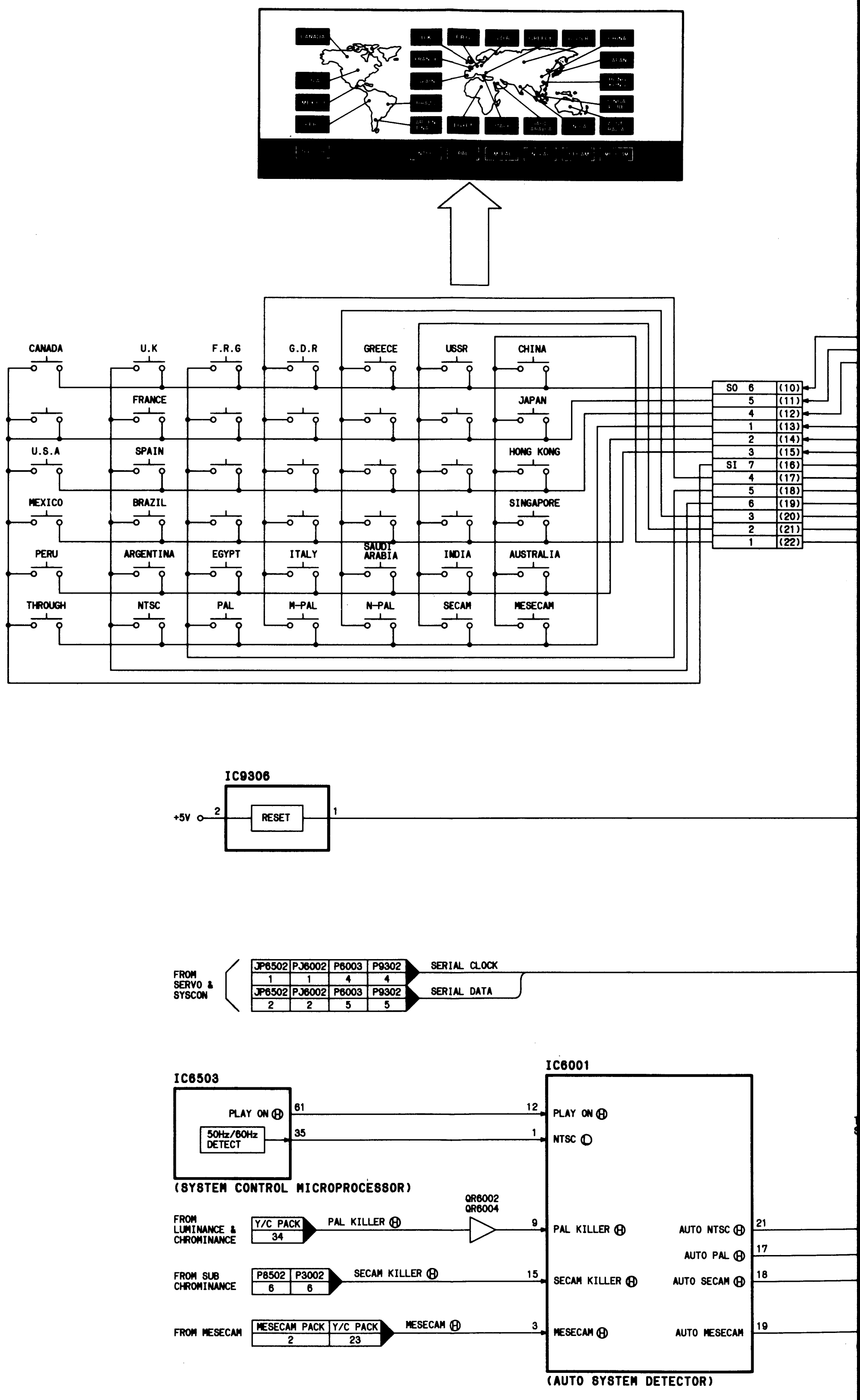
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03489D)


VR301
LINE NOISE CANCELLER
(FOIL SIDE)

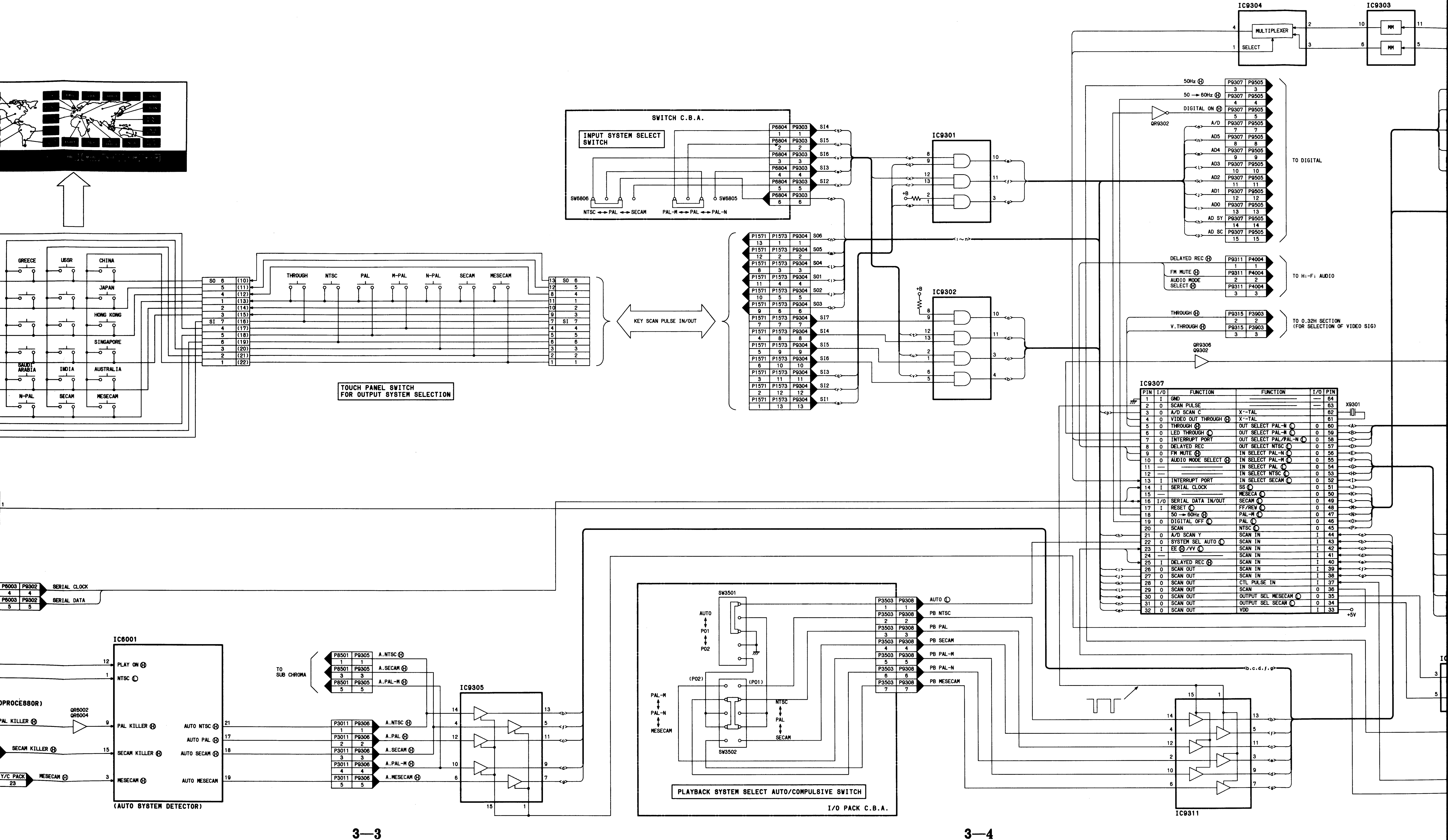
OVERALL BLOCK DIAGRAM


AUDIO LINE 1 IN
AUDIO LINE 2 IN
INPUT/OUTPUT SECTION
INPUT SELECT SWITCH
L-CH
R-CH
Hi-Fi AUDIO SECTION
Hi-Fi AUDIO SECTION
LINEAR AUDIO HEAD
IN/OUT
LINEAR AUDIO SECTION
MAIN 1 SECTION
AUDIO OUT (1)
AUDIO OUT (2)
LUMINANCE AND CHROMINANCE SECTION
LUMINANCE REC PROCESS
EE
PAL/PAL-N/MESECAM CHROMA REC PROCESS
HEAD AMP SECTION
AUDIO HEAD AMP
VIDEO HEAD AMP
AUDIO HEAD AMP
VIDEO HEAD AMP
LUMINANCE AND CHROMINANCE SECTION
LUMINANCE PB PROCESS
PAL/PAL-N/MESECAM CHROMA PB PROCESS
0.32 HORIZONTAL LINE CORRECTION SECTION
0.32 HORIZONTAL LINE CORRECTION
VIDEO-L(35μm)
VIDEO-R'(49μm)
AUDIO-L(PAL) (36μm)
AUDIO-L(NTSC) (26μm)
620μm ±5μm
120°
AUDIO-R(NTSC) (26μm)
AUDIO-R(PAL) (36μm)
620μm ±5μm
VIDEO-L'(49μm)
VIDEO-R(35μm)
VIDEO HEAD
SECAM CHROMA REC PROCESS
NTSC 3.58 CHROMA REC PROCESS
PAL-M CHROMA REC PROCESS
SUB CHROMINANCE SECTION
REC CHROMA OUTPUT SELECT SW
SECAM CHROMA PB PROCESS
NTSC 3.58 CHROMA PB PROCESS
PAL-M CHROMA PB PROCESS
SUB CHROMINANCE SECTION
PB CHROMA OUTPUT SELECT SW
PB
EE
CONV
THROUGH
REC/EE
P.B
THROUGH
CONV
VIDEO 1 OUT
VIDEO 2 OUT
VIDEO 1 IN
VIDEO 2 IN
EE
PB
OUTPUT CHROMA SELECT
THROUGH
R-Y
CONV
THROUGH
B-Y
CONV
CONV
Y
THROUGH
PAL Y/C SEPARATOR
NTSC/PAL-M/PAL-N Y/C SEPARATOR
SECAM Y/C SEPARATOR
Y
C
INPUT SELECT SWITCH
C
CHROMA MULTI DECODER
R-Y
B-Y
R-Y/B-Y MULTIPLEX
R-Y AND B-Y
A/D
CHROMINANCE DIGITAL SYSTEM CONVERTER
D/A
D/A
Y
A/D
LUMINANCE DIGITAL SYSTEM CONVERTER
D/A
DIGITAL SECTION
NTSC/PAL ENCODER SECTION
NTSC/PAL ENCODER
C
SECAM ENCODER
SECAM ENCODER SECTION
Y+C
ANALOGUE SECTION
DRIVE SECTION
SYSTEM SELECT MICROPROCESSOR
TOUCH PANEL SWITCH FOR SELECTION OF OUTPUT SIG
COUNTRY INDICATION LED ON WORLD MAP (ON TOUCH PANEL)
SERIAL DATA
SERIAL CLOCK
AUTO SYSTEM DETECT
MAIN1 SECTION
INPUT SELECT SWITCH
SWITCH SECTION
DISPLAY SECTION
DISPLAY TUBE
TIMER MICROPROCESSOR
SERIAL CLOCK
SERIAL DATA
MODE INSTRUCTION DATA
KEY MATRIX SECTION
PANEL SW SECTION
SERVO & SYSTEM CONTROL SECTION
SYSTEM CONTROL SECTION
SERVO AND SYSTEM CONTROL MICROPROCESSOR
DIGITAL CYLINDER SERVO CONTROL SECTION
DIGITAL CAPSTAN SERVO CONTROL SECTION
CYLINDER MOTOR
CYLINDER DRIVE
PG/FG
CAPSTAN MOTOR
CAPSTAN DRIVE
FG

DRIVE & AUTO SYSTEM DETECT BLOCK DIAG

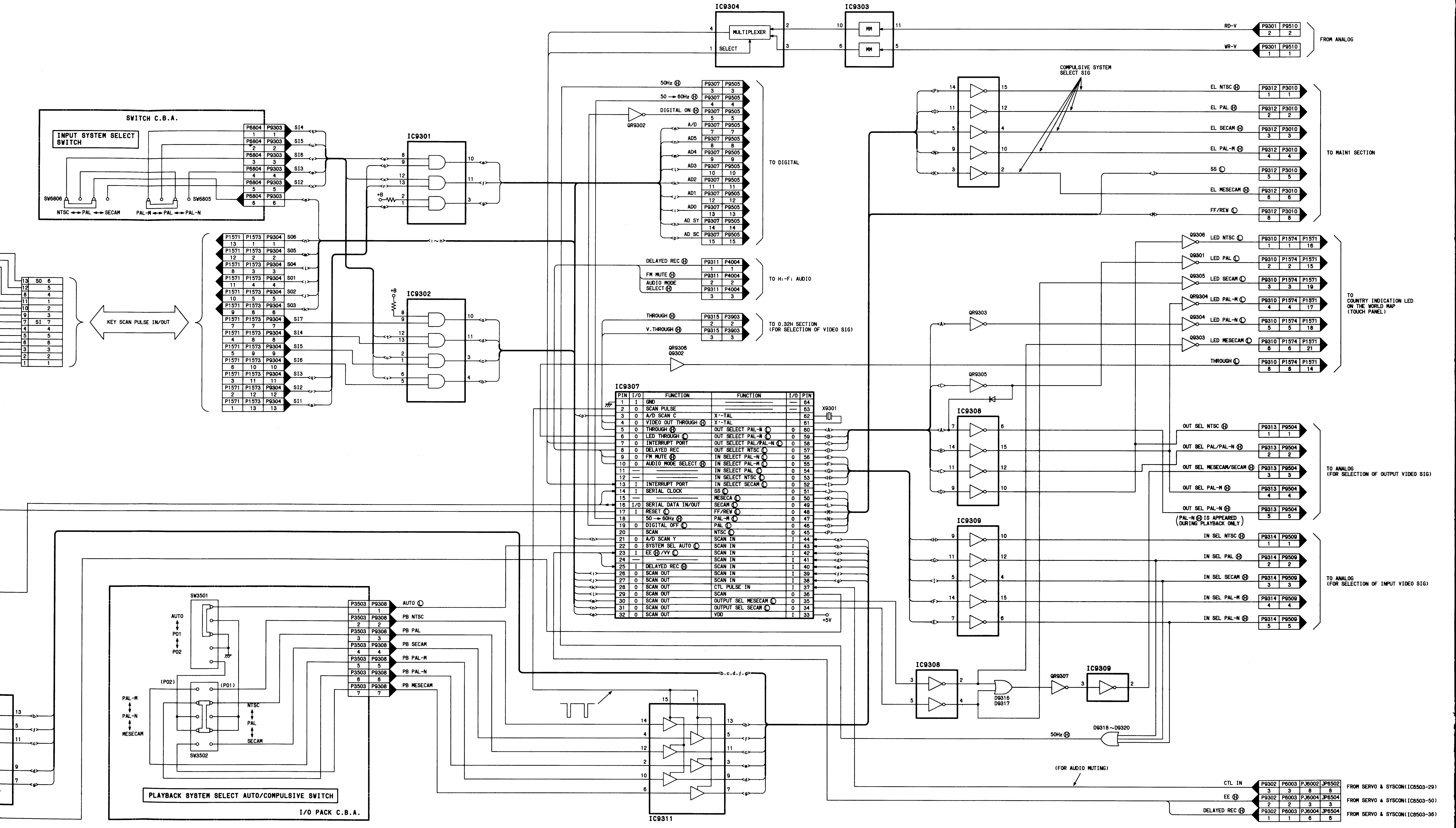

CANADA
U.K
F.R.G
G.D.R
GREECE
USSR
CHINA
FRANCE
JAPAN
U.S.A
SPAIN
HONG KONG
MEXICO
BRAZIL
SINGAPORE
PERU
ARGENTINA
EGYPT
ITALY
SAUDI ARABIA
INDIA
AUSTRALIA
THROUGH
NTSC
PAL
M-PAL
N-PAL
SECAM
MESECAM
SO 6 (10)
5 (11)
4 (12)
1 (13)
2 (14)
3 (15)
SI 7 (16)
4 (17)
5 (18)
6 (19)
3 (20)
2 (21)
1 (22)
IC9306
+5V
2
RESET
1
FROM SERVO & SYSCON
JP6502 1
PJ6002 1
P6003 4
P9302 4
SERIAL CLOCK
JP6502 2
PJ6002 2
P6003 5
P9302 5
SERIAL DATA
IC6503
PLAY ON Ⓗ
61
50Hz/60Hz DETECT
35
(SYSTEM CONTROL MICROPROCESSOR)
IC6001
12
PLAY ON Ⓗ
1
NTSC Ⓛ
FROM LUMINANCE & CHROMINANCE
Y/C PACK 34
PAL KILLER Ⓗ
QR6002
QR6004
9
PAL KILLER Ⓗ
AUTO NTSC Ⓗ
21
AUTO PAL Ⓗ
17
FROM SUB CHROMINANCE
P8502 6
P3002 6
SECAM KILLER Ⓗ
15
SECAM KILLER Ⓗ
AUTO SECAM Ⓗ
18
FROM MESECAM
MESECAM PACK 2
Y/C PACK 23
MESECAM Ⓗ
3
MESECAM Ⓗ
AUTO MESECAM
19
(AUTO SYSTEM DETECTOR)

YSTEM DETECT BLOCK DIAGRAM


IC9304
MULTIPLEXER
SELECT
IC9303
MM
MM
SWITCH C.B.A.
INPUT SYSTEM SELECT SWITCH
SW6806
NTSC ◄► PAL ◄► SECAM
PAL-M ◄► PAL ◄► PAL-N
SW6805
P6804 P9303
SI4
SI5
SI6
SI3
SI2
IC9301
IC9302
+B
50Hz Ⓗ
50 → 60Hz Ⓗ
DIGITAL ON Ⓗ
QR9302
A/D
AD5
AD4
AD3
AD2
AD1
AD0
AD SY
AD SC
P9307 P9505
TO DIGITAL
DELAYED REC Ⓗ
FM MUTE Ⓗ
AUDIO MODE SELECT Ⓗ
P9311 P4004
TO Hi-Fi AUDIO
THROUGH Ⓗ
V.THROUGH Ⓗ
P9315 P3903
TO 0.32H SECTION (FOR SELECTION OF VIDEO SIG)
QR9306
Q9302
X9301
+5V
GREECE
USSR
CHINA
JAPAN
HONG KONG
SINGAPORE
SAUDI ARABIA
INDIA
AUSTRALIA
N-PAL
SECAM
MESECAM
SO 6
SI 7
THROUGH
NTSC
PAL
M-PAL
N-PAL
SECAM
MESECAM
TOUCH PANEL SWITCH FOR OUTPUT SYSTEM SELECTION
KEY SCAN PULSE IN/OUT
P1571 P1573 P9304
SO6
SO5
SO4
SO1
SO2
SO3
SI7
SI4
SI5
SI6
SI3
SI2
SI1
P6003 P9302
SERIAL CLOCK
SERIAL DATA
IC6001
PLAY ON Ⓗ
NTSC Ⓛ
PAL KILLER Ⓗ
SECAM KILLER Ⓗ
MESECAM Ⓗ
AUTO NTSC Ⓗ
AUTO PAL Ⓗ
AUTO SECAM Ⓗ
AUTO MESECAM
(AUTO SYSTEM DETECTOR)
PROCESSOR)
QR6002
QR6004
AL KILLER Ⓗ
SECAM KILLER Ⓗ
Y/C PACK
23
MESECAM Ⓗ
TO SUB CHROMA
P8501 P9305
A.NTSC Ⓗ
A.SECAM Ⓗ
A.PAL-M Ⓗ
P3011 P9306
A.NTSC Ⓗ
A.PAL Ⓗ
A.SECAM Ⓗ
A.PAL-M Ⓗ
A.MESECAM Ⓗ
IC9305
SW3501
AUTO
P01
P02
(P02)
(P01)
PAL-M
PAL-N
MESECAM
NTSC
PAL
SECAM
SW3502
P3503 P9308
AUTO Ⓛ
PB NTSC
PB PAL
PB SECAM
PB PAL-M
PB PAL-N
PB MESECAM
PLAYBACK SYSTEM SELECT AUTO/COMPULSIVE SWITCH
I/O PACK C.B.A.
b,c,d,f,g
IC9311

IC9307

PIN	I/O	FUNCTION	FUNCTION	I/O	PIN
1	I	GND	———	—	64
2	0	SCAN PULSE	———	—	63
3	0	A/D SCAN C	X'-TAL		62
4	0	VIDEO OUT THROUGH Ⓗ	X'-TAL		61
5	0	THROUGH Ⓗ	OUT SELECT PAL-N Ⓛ	0	60
6	0	LED THROUGH Ⓛ	OUT SELECT PAL-M Ⓛ	0	59
7	0	INTERRUPT PORT	OUT SELECT PAL/PAL-N Ⓛ	0	58
8	0	DELAYED REC	OUT SELECT NTSC Ⓛ	0	57
9	0	FM MUTE Ⓗ	IN SELECT PAL-N Ⓛ	0	56
10	0	AUDIO MODE SELECT Ⓗ	IN SELECT PAL-M Ⓛ	0	55
11	—	———	IN SELECT PAL Ⓛ	0	54
12	—	———	IN SELECT NTSC Ⓛ	0	53
13	I	INTERRUPT PORT	IN SELECT SECAM Ⓛ	0	52
14	I	SERIAL CLOCK	SS Ⓛ	0	51
15	—	———	MESECA Ⓛ	0	50
16	I/0	SERIAL DATA IN/OUT	SECAM Ⓛ	0	49
17	I	RESET Ⓛ	FF/REW Ⓛ	0	48
18		50 → 60Hz Ⓗ	PAL-M Ⓛ	0	47
19	0	DIGITAL OFF Ⓛ	PAL Ⓛ	0	46
20		SCAN	NTSC Ⓛ	0	45
21	0	A/D SCAN Y	SCAN IN	I	44
22	0	SYSTEM SEL AUTO Ⓛ	SCAN IN	I	43
23	I	EE Ⓗ/VV Ⓛ	SCAN IN	I	42
24	—	———	SCAN IN	I	41
25	I	DELAYED REC Ⓗ	SCAN IN	I	40
26	0	SCAN OUT	SCAN IN	I	39
27	0	SCAN OUT	SCAN IN	I	38
28	0	SCAN OUT	CTL PULSE IN	I	37
29	0	SCAN OUT	SCAN	0	36
30	0	SCAN OUT	OUTPUT SEL MESECAM Ⓛ	0	35
31	0	SCAN OUT	OUTPUT SEL SECAM Ⓛ	0	34
32	0	SCAN OUT	VDD	I	33


IC9304
MULTIPLEXER
SELECT
IC9303
MM
MM
RD-V
WR-V
P9301 P9510
FROM ANALOG
COMPULSIVE SYSTEM SELECT SIG
EL NTSC Ⓗ
EL PAL Ⓗ
EL SECAM Ⓗ
EL PAL-M Ⓗ
SS Ⓛ
EL MESECAM Ⓗ
FF/REW Ⓛ
P9312 P3010
TO MAIN1 SECTION
Q9306 LED NTSC Ⓛ
Q9301 LED PAL Ⓛ
Q9305 LED SECAM Ⓛ
QR9304 LED PAL-M Ⓛ
Q9304 LED PAL-N Ⓛ
Q9303 LED MESECAM Ⓛ
THROUGH Ⓛ
P9310 P1574 P1571
TO COUNTRY INDICATION LED ON THE WORLD MAP (TOUCH PANEL)
QR9303
QR9305
IC9308
IC9309
OUT SEL NTSC Ⓗ
OUT SEL PAL/PAL-N Ⓗ
OUT SEL MESECAM/SECAM Ⓗ
OUT SEL PAL-M Ⓗ
OUT SEL PAL-N Ⓗ
(PAL-N Ⓗ IS APPEARED DURING PLAYBACK ONLY)
P9313 P9504
TO ANALOG (FOR SELECTION OF OUTPUT VIDEO SIG)
IN SEL NTSC Ⓗ
IN SEL PAL Ⓗ
IN SEL SECAM Ⓗ
IN SEL PAL-M Ⓗ
IN SEL PAL-N Ⓗ
P9314 P9509
TO ANALOG (FOR SELECTION OF INPUT VIDEO SIG)
50Hz Ⓗ
50 → 60Hz Ⓗ
DIGITAL ON Ⓗ
QR9302
A/D
AD5
AD4
AD3
AD2
AD1
AD0
AD SY
AD SC
P9307 P9505
TO DIGITAL
DELAYED REC Ⓗ
FM MUTE Ⓗ
AUDIO MODE SELECT Ⓗ
P9311 P4004
TO Hi-Fi AUDIO
THROUGH Ⓗ
V.THROUGH Ⓗ
P9315 P3903
TO 0.32H SECTION (FOR SELECTION OF VIDEO SIG)
QR9306
Q9302
X9301
+5V
IC9301
IC9302
+B
SWITCH C.B.A.
INPUT SYSTEM SELECT SWITCH
SW6806
SW6805
NTSC ↔ PAL ↔ SECAM
PAL-M ↔ PAL ↔ PAL-N
P6804 P9303
SI4
SI5
SI6
SI3
SI2
P1571 P1573 P9304
SO6
SO5
SO4
SO1
SO2
SO3
SI7
SI4
SI5
SI6
SI3
SI2
SI1
SO
SI
KEY SCAN PULSE IN/OUT
SW3501
AUTO ↔ P01 ↔ P02
(P02)
(P01)
PAL-M ↔ PAL-N ↔ MESECAM
NTSC ↔ PAL ↔ SECAM
SW3502
P3503 P9308
AUTO Ⓛ
PB NTSC
PB PAL
PB SECAM
PB PAL-M
PB PAL-N
PB MESECAM
PLAYBACK SYSTEM SELECT AUTO/COMPULSIVE SWITCH
I/O PACK C.B.A.
IC9311
<b,c,d,f,g>
IC9308
D9316
D9317
QR9307
IC9309
50Hz Ⓗ
D9318～D9320
(FOR AUDIO MUTING)
CTL IN
EE Ⓗ
DELAYED REC Ⓗ
P9302 P6003 PJ6002 JP6502
P9302 P6003 PJ6004 JP6504
FROM SERVO & SYSCON(IC6503-29)
FROM SERVO & SYSCON(IC6503-50)
FROM SERVO & SYSCON(IC6503-36)

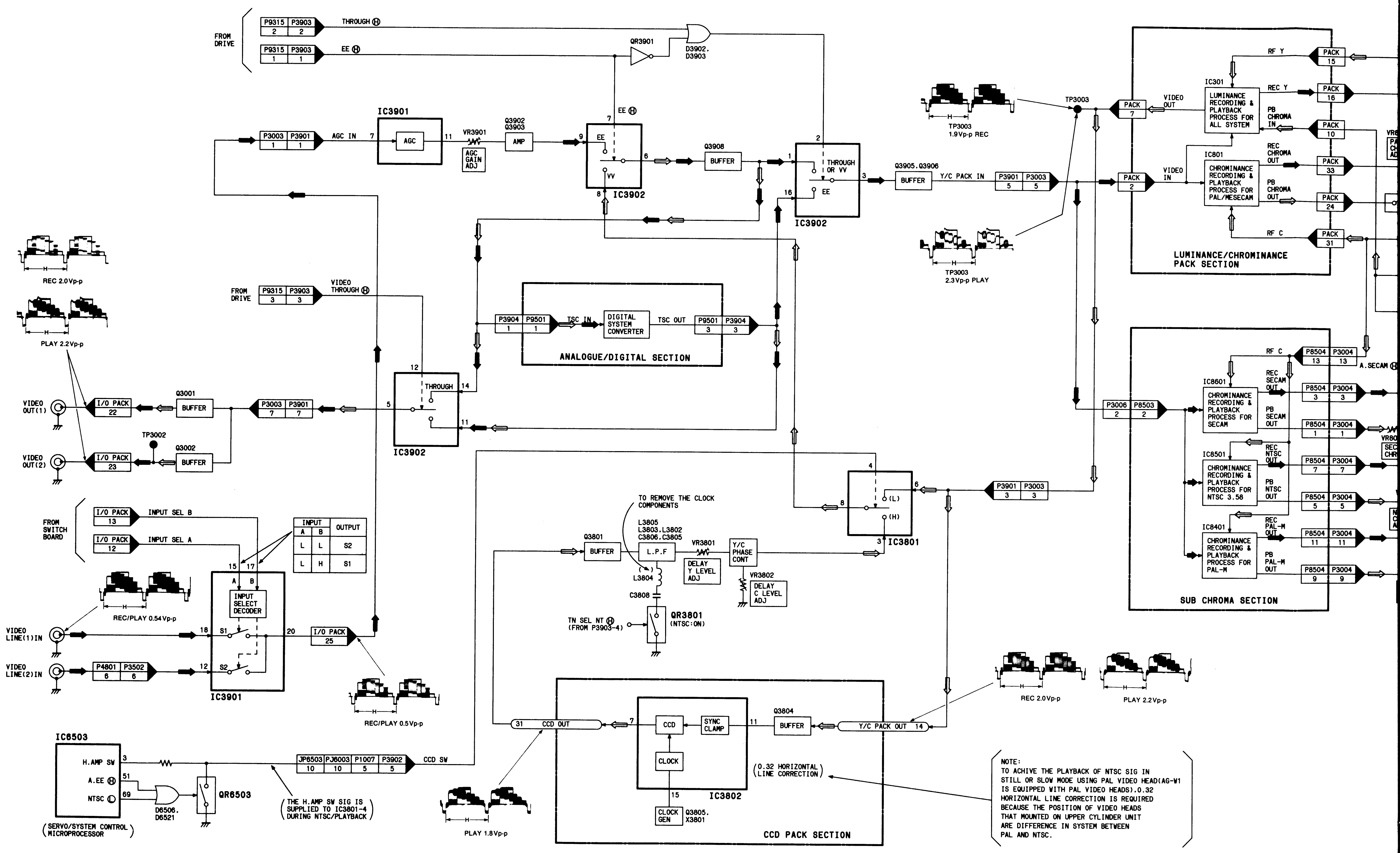
IC9307

PIN	I/O	FUNCTION	FUNCTION	I/O	PIN
1	I	GND	————	—	64
2	0	SCAN PULSE	————	—	63
3	0	A/D SCAN C	X'-TAL		62
4	0	VIDEO OUT THROUGH Ⓗ	X'-TAL		61
5	0	THROUGH Ⓗ	OUT SELECT PAL-N Ⓛ	0	60
6	0	LED THROUGH Ⓛ	OUT SELECT PAL-M Ⓛ	0	59
7	0	INTERRUPT PORT	OUT SELECT PAL/PAL-N Ⓛ	0	58
8	0	DELAYED REC	OUT SELECT NTSC Ⓛ	0	57
9	0	FM MUTE Ⓗ	IN SELECT PAL-N Ⓛ	0	56
10	0	AUDIO MODE SELECT Ⓗ	IN SELECT PAL-M Ⓛ	0	55
11	—	————	IN SELECT PAL Ⓛ	0	54
12	—	————	IN SELECT NTSC Ⓛ	0	53
13	I	INTERRUPT PORT	IN SELECT SECAM Ⓛ	0	52
14	I	SERIAL CLOCK	SS Ⓛ	0	51
15	—	————	MESECA Ⓛ	0	50
16	I/O	SERIAL DATA IN/OUT	SECAM Ⓛ	0	49
17	I	RESET Ⓛ	FF/REW Ⓛ	0	48
18		50 → 60Hz Ⓗ	PAL-M Ⓛ	0	47
19	0	DIGITAL OFF Ⓛ	PAL Ⓛ	0	46
20		SCAN	NTSC Ⓛ	0	45
21	0	A/D SCAN Y	SCAN IN	I	44
22	0	SYSTEM SEL AUTO Ⓛ	SCAN IN	I	43
23	I	EE Ⓗ /VV Ⓛ	SCAN IN	I	42
24	—	————	SCAN IN	I	41
25	I	DELAYED REC Ⓗ	SCAN IN	I	40
26	0	SCAN OUT	SCAN IN	I	39
27	0	SCAN OUT	SCAN IN	I	38
28	0	SCAN OUT	CTL PULSE IN	I	37
29	0	SCAN OUT	SCAN	0	36
30	0	SCAN OUT	OUTPUT SEL MESECAM Ⓛ	0	35
31	0	SCAN OUT	OUTPUT SEL SECAM Ⓛ	0	34
32	0	SCAN OUT	VDD	I	33

OVERALL VIDEO BLOCK DIAGRAM

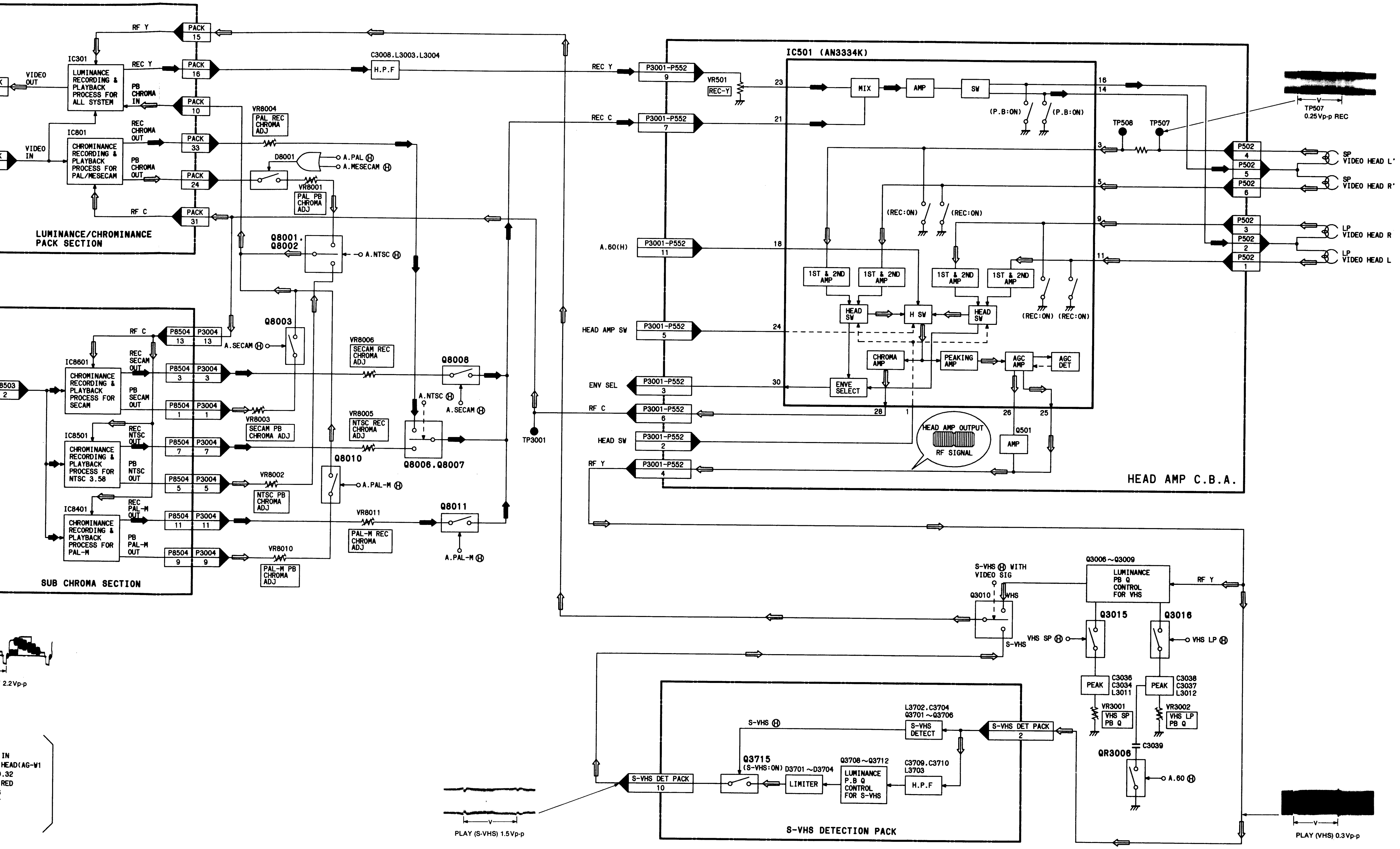
⬅ VIDEO MAIN SIGNAL PATH IN REC MODE

⇦ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE


FROM DRIVE
P9315 P3903 2 2
THROUGH Ⓗ
P9315 P3903 1 1
EE Ⓗ
QR3901
D3902, D3903
IC3901
P3003 P3901 1 1
AGC IN
AGC
VR3901
AGC GAIN ADJ
Q3902 Q3903
AMP
EE Ⓗ
EE
VV
IC3902
Q3908
BUFFER
THROUGH OR VV
EE
IC3902
Q3905, Q3906
BUFFER
Y/C PACK IN
P3901 P3003 5 5
TP3003 1.9Vp-p REC
TP3003
TP3003 2.3Vp-p PLAY
PACK 7
VIDEO OUT
PACK 2
VIDEO IN
IC301
LUMINANCE RECORDING & PLAYBACK PROCESS FOR ALL SYSTEM
RF Y
PACK 15
REC Y
PACK 16
PB CHROMA IN
PACK 10
IC801
CHROMINANCE RECORDING & PLAYBACK PROCESS FOR PAL/MESECAM
REC CHROMA OUT
PACK 33
PB CHROMA OUT
PACK 24
RF C
PACK 31
LUMINANCE/CHROMINANCE PACK SECTION
REC 2.0Vp-p
PLAY 2.2Vp-p
FROM DRIVE
P9315 P3903 3 3
VIDEO THROUGH Ⓗ
P3904 P9501 1 1
TSC IN
DIGITAL SYSTEM CONVERTER
TSC OUT
P9501 P3904 3 3
ANALOGUE/DIGITAL SECTION
VIDEO OUT(1)
I/O PACK 22
Q3001
BUFFER
P3003 P3901 7 7
THROUGH
IC3902
TP3002
VIDEO OUT(2)
I/O PACK 23
Q3002
BUFFER
FROM SWITCH BOARD
I/O PACK 13
INPUT SEL B
I/O PACK 12
INPUT SEL A
INPUT A B
OUTPUT
L L S2
L H S1
INPUT SELECT DECODER
IC3901
REC/PLAY 0.54Vp-p
VIDEO LINE(1)IN
VIDEO LINE(2)IN
P4801 P3502 6 6
I/O PACK 25
REC/PLAY 0.5Vp-p
IC6503
H.AMP SW
A.EE Ⓗ
NTSC Ⓛ
D6506, D6521
QR6503
(SERVO/SYSTEM CONTROL MICROPROCESSOR)
JP6503 PJ6003 P1007 P3902 10 10 5 5
CCD SW
(THE H.AMP SW SIG IS SUPPLIED TO IC3801-4 DURING NTSC/PLAYBACK)
PLAY 1.8Vp-p
TO REMOVE THE CLOCK COMPONENTS
L3805 L3803, L3802 C3806, C3805
Q3801
BUFFER
L.P.F
L3804
C3808
VR3801
DELAY Y LEVEL ADJ
Y/C PHASE CONT
VR3802
DELAY C LEVEL ADJ
TN SEL NT Ⓗ (FROM P3903-4)
QR3801 (NTSC:ON)
(L)
(H)
IC3801
P3901 P3003 3 3
31 CCD OUT
CCD
SYNC CLAMP
CLOCK
CLOCK GEN
Q3805, X3801
IC3802
(0.32 HORIZONTAL LINE CORRECTION)
Q3804
BUFFER
Y/C PACK OUT 14
CCD PACK SECTION
REC 2.0Vp-p
PLAY 2.2Vp-p
RF C
P8504 P3004 13 13
A.SECAM Ⓗ
IC8601
CHROMINANCE RECORDING & PLAYBACK PROCESS FOR SECAM
REC SECAM OUT
PB SECAM OUT
P3006 P8503 2 2
IC8501
CHROMINANCE RECORDING & PLAYBACK PROCESS FOR NTSC 3.58
REC NTSC OUT
PB NTSC OUT
IC8401
CHROMINANCE RECORDING & PLAYBACK PROCESS FOR PAL-M
REC PAL-M OUT
PB PAL-M OUT
P8504 P3004 3 3
P8504 P3004 1 1
P8504 P3004 7 7
P8504 P3004 5 5
P8504 P3004 11 11
P8504 P3004 9 9
SUB CHROMA SECTION

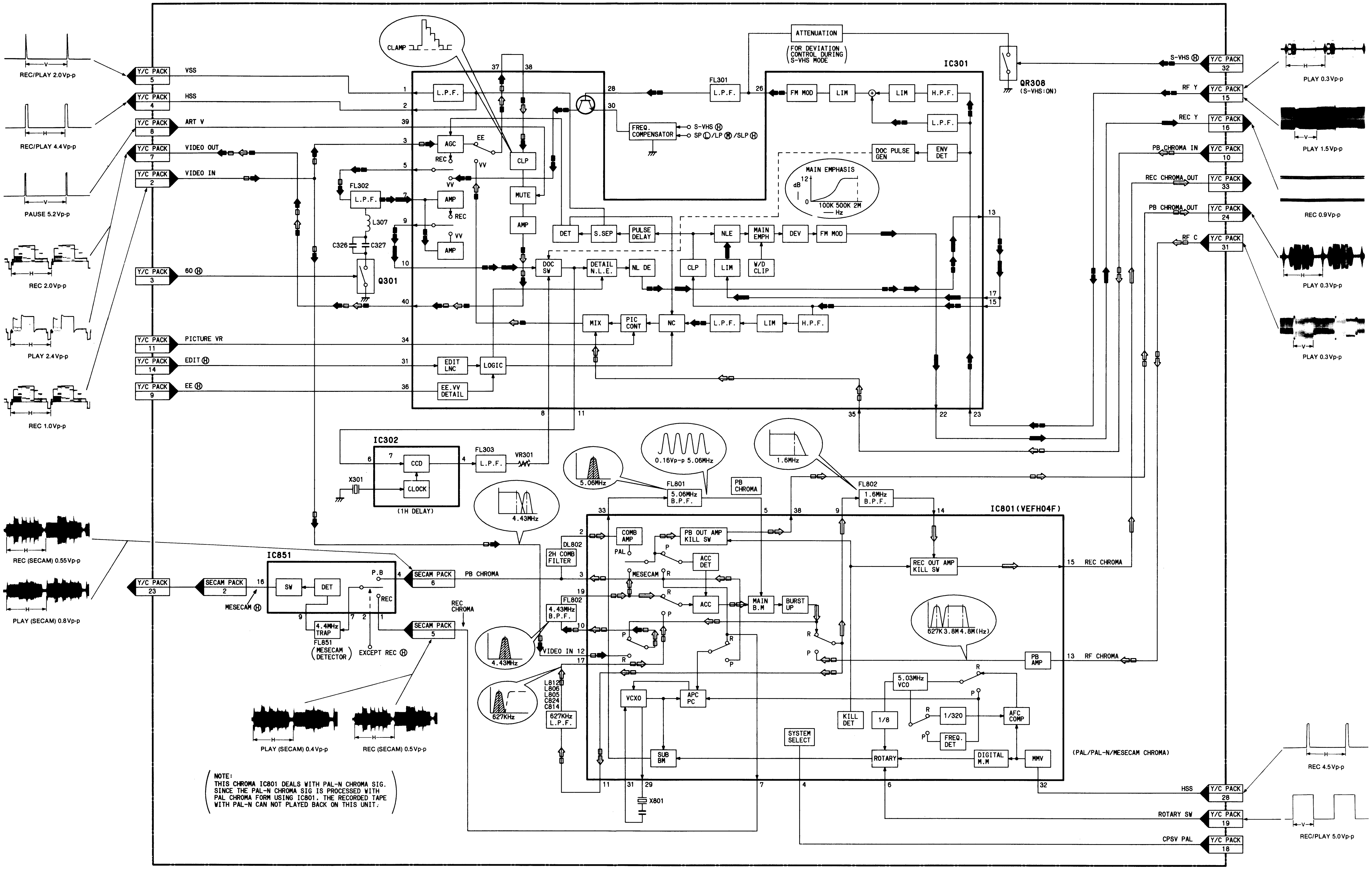
NOTE:
TO ACHIVE THE PLAYBACK OF NTSC SIG IN STILL OR SLOW MODE USING PAL VIDEO HEAD(AG-W1 IS EQUIPPED WITH PAL VIDEO HEADS).0.32 HORIZONTAL LINE CORRECTION IS REQUIRED BECAUSE THE POSITION OF VIDEO HEADS THAT MOUNTED ON UPPER CYLINDER UNIT ARE DIFFERENCE IN SYSTEM BETWEEN PAL AND NTSC.

IGNAL PATH IN PLAYBACK MODE


RF Y
PACK 15
IC301
LUMINANCE RECORDING & PLAYBACK PROCESS FOR ALL SYSTEM
VIDEO OUT
REC Y
PACK 16
PB CHROMA IN
PACK 10
C3008.L3003.L3004
H.P.F
VR8004
PAL REC CHROMA ADJ
IC801
CHROMINANCE RECORDING & PLAYBACK PROCESS FOR PAL/MESECAM
VIDEO IN
REC CHROMA OUT
PACK 33
PB CHROMA OUT
PACK 24
D8001
A.PAL Ⓗ
A.MESECAM Ⓗ
VR8001
PAL PB CHROMA ADJ
RF C
PACK 31
LUMINANCE/CHROMINANCE PACK SECTION
Q8001. Q8002
A.NTSC Ⓗ
Q8003
A.SECAM Ⓗ
P8504 P3004 13 13
IC8601
CHROMINANCE RECORDING & PLAYBACK PROCESS FOR SECAM
REC SECAM OUT
PB SECAM OUT
P8504 P3004 3 3
P8504 P3004 1 1
8503 2
VR8006
SECAM REC CHROMA ADJ
Q8008
VR8003
SECAM PB CHROMA ADJ
IC8501
CHROMINANCE RECORDING & PLAYBACK PROCESS FOR NTSC 3.58
REC NTSC OUT
PB NTSC OUT
P8504 P3004 7 7
P8504 P3004 5 5
VR8005
NTSC REC CHROMA ADJ
A.NTSC Ⓗ
A.SECAM Ⓗ
Q8006.Q8007
TP3001
Q8010
A.PAL-M Ⓗ
VR8002
NTSC PB CHROMA ADJ
IC8401
CHROMINANCE RECORDING & PLAYBACK PROCESS FOR PAL-M
REC PAL-M OUT
PB PAL-M OUT
P8504 P3004 11 11
P8504 P3004 9 9
VR8011
PAL-M REC CHROMA ADJ
Q8011
A.PAL-M Ⓗ
VR8010
PAL-M PB CHROMA ADJ
SUB CHROMA SECTION
2.2Vp-p
IN
HEAD(AG-W1
.32
RED
IC501 (AN3334K)
REC Y
P3001-P552 9
VR501
REC-Y
23
MIX
AMP
SW
16
14
(P.B:ON)
(P.B:ON)
REC C
P3001-P552 7
21
TP508
TP507
TP507
0.25Vp-p REC
3
P502 4
SP VIDEO HEAD L'
P502 5
5
P502 6
SP VIDEO HEAD R'
(REC:ON)
(REC:ON)
9
P502 3
LP VIDEO HEAD R
P502 2
11
P502 1
LP VIDEO HEAD L
A.60(H)
P3001-P552 11
18
1ST & 2ND AMP
1ST & 2ND AMP
1ST & 2ND AMP
1ST & 2ND AMP
HEAD SW
H SW
HEAD SW
(REC:ON)
(REC:ON)
HEAD AMP SW
P3001-P552 5
24
CHROMA AMP
PEAKING AMP
AGC AMP
AGC DET
ENV SEL
P3001-P552 3
30
ENVE SELECT
RF C
P3001-P552 6
28
1
26
25
HEAD SW
P3001-P552 2
HEAD AMP OUTPUT
RF SIGNAL
Q501
AMP
RF Y
P3001-P552 4
HEAD AMP C.B.A.
S-VHS Ⓗ WITH VIDEO SIG
Q3006～Q3009
LUMINANCE PB Q CONTROL FOR VHS
RF Y
Q3010
VHS
S-VHS
Q3015
Q3016
VHS SP Ⓗ
VHS LP Ⓗ
PEAK
C3036 C3034 L3011
PEAK
C3038 C3037 L3012
VR3001
VHS SP PB Q
VR3002
VHS LP PB Q
C3039
QR3006
A.60 Ⓗ
L3702.C3704 Q3701～Q3706
S-VHS Ⓗ
S-VHS DETECT
S-VHS DET PACK 2
Q3715
(S-VHS:ON)
D3701～D3704
LIMITER
Q3708～Q3712
LUMINANCE P.B Q CONTROL FOR S-VHS
C3709.C3710 L3703
H.P.F
S-VHS DET PACK 10
S-VHS DETECTION PACK
PLAY (S-VHS) 1.5Vp-p
PLAY (VHS) 0.3Vp-p

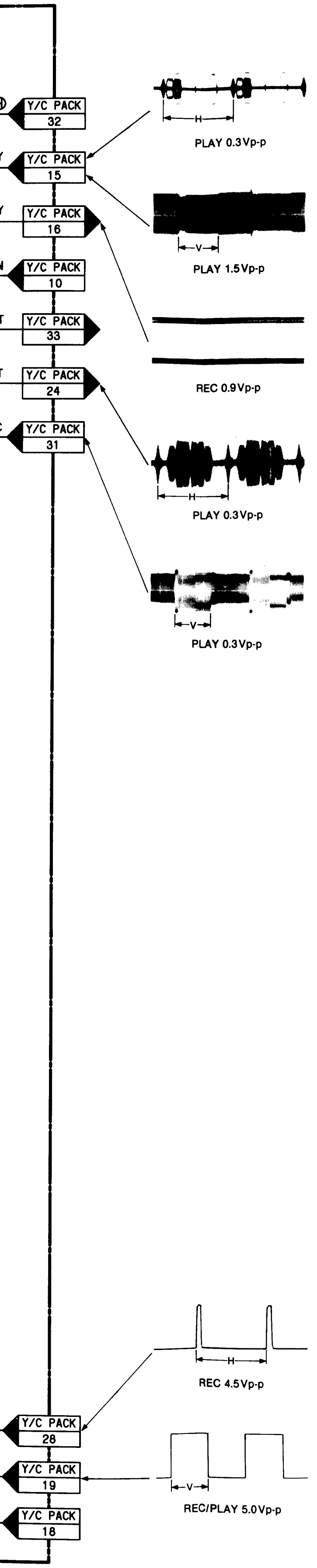
LUMINANCE & CHROMINANCE PACK BLOCK DIAGRAM

- VIDEO MAIN SIGNAL PATH IN REC MODE
- LUMINANCE MAIN SIGNAL PATH IN REC MODE
- CHROMINANCE MAIN SIGNAL PATH IN REC MODE
- VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
- LUMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE
- CHROMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE


REC/PLAY 2.0Vp-p
REC/PLAY 4.4Vp-p
PAUSE 5.2Vp-p
REC 2.0Vp-p
PLAY 2.4Vp-p
REC 1.0Vp-p
REC (SECAM) 0.55Vp-p
PLAY (SECAM) 0.8Vp-p
PLAY (SECAM) 0.4Vp-p
REC (SECAM) 0.5Vp-p
Y/C PACK 5 VSS
Y/C PACK 4 HSS
Y/C PACK 8 ART V
Y/C PACK 7 VIDEO OUT
Y/C PACK 2 VIDEO IN
Y/C PACK 3 60 Ⓗ
Y/C PACK 11 PICTURE VR
Y/C PACK 14 EDIT Ⓗ
Y/C PACK 9 EE Ⓗ
Y/C PACK 23
SECAM PACK 2
SECAM PACK 6
SECAM PACK 5
MESECAM Ⓗ
IC851
SW
DET
P.B
REC
4.4MHz TRAP
FL851 (MESECAM DETECTOR)
EXCEPT REC Ⓗ
PB CHROMA
REC CHROMA
CLAMP
IC301
L.P.F.
AGC
EE
REC
VV
CLP
MUTE
AMP
FL302
L.P.F.
L307
C326
C327
Q301
DOC SW
DETAIL N.L.E.
NL DE
DET
S.SEP
PULSE DELAY
MIX
PIC CONT
NC
EDIT LNC
LOGIC
EE.VV DETAIL
FREQ. COMPENSATOR
S-VHS Ⓗ
SP Ⓛ/LP Ⓜ/SLP Ⓗ
ATTENUATION
(FOR DEVIATION CONTROL DURING S-VHS MODE)
FL301
L.P.F.
FM MOD
LIM
H.P.F.
DOC PULSE GEN
ENV DET
MAIN EMPHASIS
dB
12
0
100K 500K 2M
Hz
NLE
MAIN EMPH
DEV
FM MOD
CLP
LIM
W/D CLIP
QR308
(S-VHS:ON)
Y/C PACK 32 S-VHS Ⓗ
Y/C PACK 15 RF Y
Y/C PACK 16 REC Y
Y/C PACK 10 PB CHROMA IN
Y/C PACK 33 REC CHROMA OUT
Y/C PACK 24 PB CHROMA OUT
Y/C PACK 31 RF C
PLAY 0.3Vp-p
PLAY 1.5Vp-p
REC 0.9Vp-p
PLAY 0.3Vp-p
PLAY 0.3Vp-p
IC302
CCD
CLOCK
(1H DELAY)
X301
FL303
L.P.F.
VR301
0.16Vp-p 5.06MHz
5.06MHz
1.6MHz
4.43MHz
627KHz
FL801
5.06MHz B.P.F.
PB CHROMA
FL802
1.6MHz B.P.F.
IC801(VEFH04F)
DL802
2H COMB FILTER
FL802
4.43MHz B.P.F.
VIDEO IN
L812 L806 L805 C824 C814
627KHz L.P.F.
COMB AMP
PAL
MESECAM
PB OUT AMP KILL SW
ACC DET
ACC
MAIN B.M
BURST UP
REC OUT AMP KILL SW
REC CHROMA
RF CHROMA
PB AMP
627K 3.8M 4.8M (Hz)
VCXO
APC PC
SUB BM
X801
KILL DET
SYSTEM SELECT
5.03MHz VCO
1/8
1/320
FREQ. DET
AFC COMP
ROTARY
DIGITAL M.M
MMV
(PAL/PAL-N/MESECAM CHROMA)
HSS Y/C PACK 28
ROTARY SW Y/C PACK 19
CPSV PAL Y/C PACK 18
REC 4.5Vp-p
REC/PLAY 5.0Vp-p

NOTE:
THIS CHROMA IC801 DEALS WITH PAL-N CHROMA SIG.
SINCE THE PAL-N CHROMA SIG IS PROCESSED WITH
PAL CHROMA FORM USING IC801. THE RECORDED TAPE
WITH PAL-N CAN NOT PLAYED BACK ON THIS UNIT.

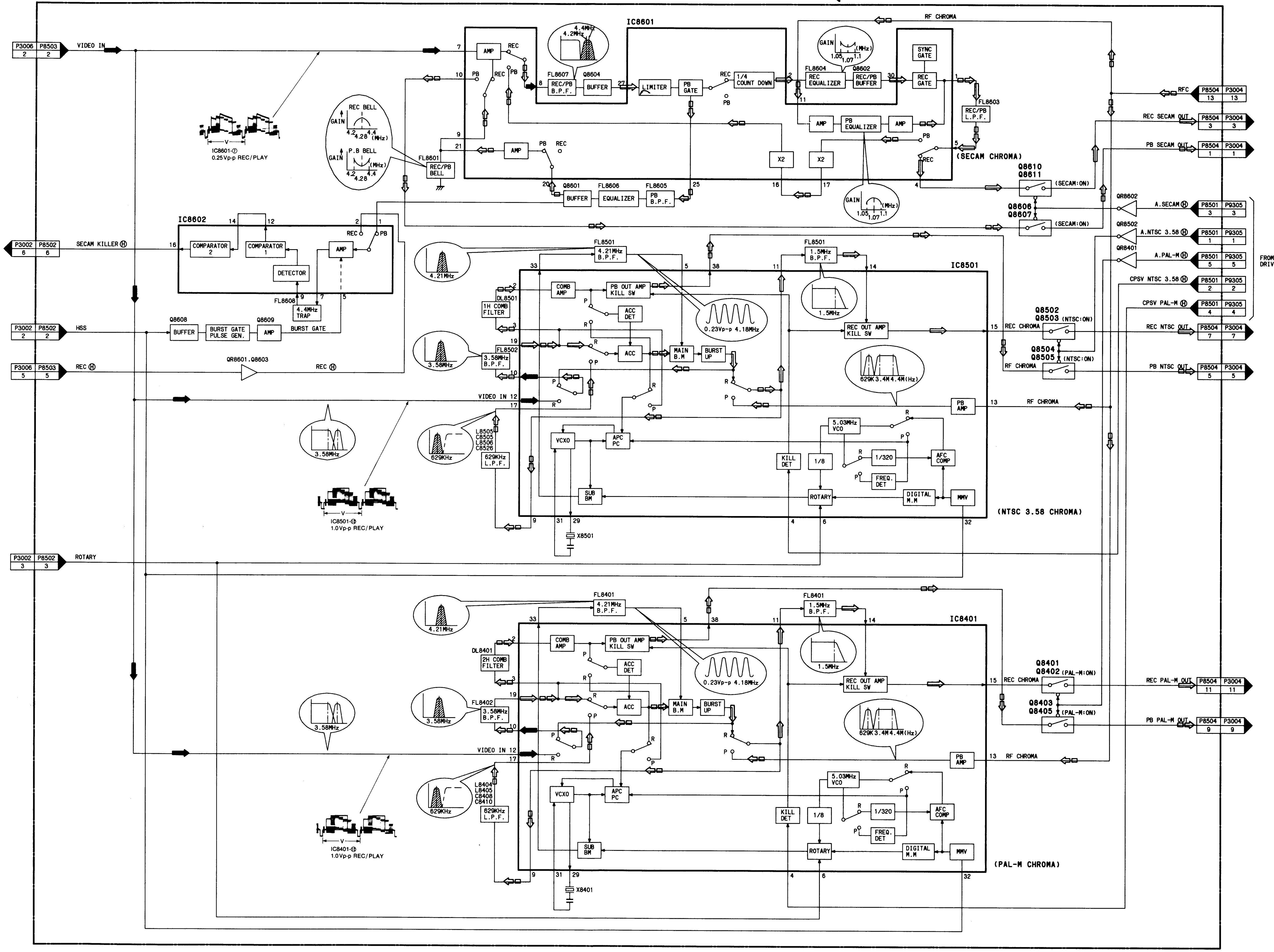
ODE
C MODE
MODE
BACK MODE
AYBACK MODE



Y/C PACK 32
Y/C PACK 15
Y/C PACK 16
Y/C PACK 10
Y/C PACK 33
Y/C PACK 24
Y/C PACK 31
H
PLAY 0.3Vp-p
V
PLAY 1.5Vp-p
REC 0.9Vp-p
H
PLAY 0.3Vp-p
V
PLAY 0.3Vp-p
H
REC 4.5Vp-p
Y/C PACK 28
Y/C PACK 19
Y/C PACK 18
V
REC/PLAY 5.0Vp-p

◀ VIDEO MAIN SIGNAL PATH IN REC MODE
◁ CHROMINANCE MAIN SIGNAL PATH IN REC MODE
◁□ CHROMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE

SUB CHROMA (NTSC 3.58, PAL-M, SECAM) BLOCK DIAGRAM



P3006 P8503 2 2
VIDEO IN
IC8601
AMP
REC
PB
REC/PB B.P.F.
FL8607
Q8604
BUFFER
4.4MHz
4.2MHz
LIMITER
PB GATE
1/4 COUNT DOWN
RF CHROMA
GAIN
(MHz)
1.05
1.07
1.1
FL8604
Q8602
REC EQUALIZER
REC/PB BUFFER
SYNC GATE
REC GATE
FL8603
REC/PB L.P.F.
AMP
PB EQUALIZER
X2
(SECAM CHROMA)
REC BELL
P.B BELL
4.2
4.28
4.4
FL8601
REC/PB BELL
Q8601
FL8606
FL8605
BUFFER
EQUALIZER
PB B.P.F.
IC8601-⑦
0.25Vp-p REC/PLAY
IC8602
COMPARATOR 2
COMPARATOR 1
DETECTOR
FL8608
4.4MHz TRAP
P3002 P8502 6 6
SECAM KILLER Ⓗ
P3002 P8502 2 2
HSS
Q8608
BUFFER
BURST GATE PULSE GEN.
Q8609
AMP
BURST GATE
P3006 P8503 5 5
REC Ⓗ
QR8601,Q8603
REC Ⓗ
Q8610
Q8611
(SECAM:ON)
Q8606
Q8607
(SECAM:ON)
RFC
P8504 P3004 13 13
REC SECAM OUT
P8504 P3004 3 3
PB SECAM OUT
P8504 P3004 1 1
QR8602
A.SECAM Ⓗ
P8501 P9305 3 3
QR8502
A.NTSC 3.58 Ⓗ
P8501 P9305 1 1
QR8401
A.PAL-M Ⓗ
P8501 P9305 5 5
CPSV NTSC 3.58 Ⓗ
P8501 P9305 2 2
CPSV PAL-M Ⓗ
P8501 P9305 4 4
FROM DRIVE
FL8501
4.21MHz B.P.F.
4.21MHz
FL8501
1.5MHz B.P.F.
IC8501
DL8501
1H COMB FILTER
COMB AMP
PB OUT AMP KILL SW
ACC DET
ACC
MAIN B.M
BURST UP
0.23Vp-p 4.18MHz
1.5MHz
REC OUT AMP KILL SW
Q8502
Q8503 (NTSC:ON)
REC CHROMA
Q8504
Q8505 (NTSC:ON)
RF CHROMA
REC NTSC OUT
P8504 P3004 7 7
PB NTSC OUT
P8504 P3004 5 5
FL8502
3.58MHz B.P.F.
3.58MHz
629K 3.4M 4.4M(Hz)
VIDEO IN
PB AMP
RF CHROMA
L8505
C8505
L8506
C8526
629KHz L.P.F.
629KHz
VCXO
APC PC
5.03MHz VCO
KILL DET
1/8
1/320
AFC COMP
FREQ. DET
SUB BM
ROTARY
DIGITAL M.M
MMV
(NTSC 3.58 CHROMA)
X8501
IC8501-⑬
1.0Vp-p REC/PLAY
P3002 P8502 3 3
ROTARY
FL8401
4.21MHz B.P.F.
FL8401
1.5MHz B.P.F.
IC8401
DL8401
2H COMB FILTER
FL8402
3.58MHz B.P.F.
Q8401
Q8402 (PAL-M:ON)
Q8403
Q8405 (PAL-M:ON)
REC PAL-M OUT
P8504 P3004 11 11
PB PAL-M OUT
P8504 P3004 9 9
L8404
L8405
C8408
C8410
X8401
(PAL-M CHROMA)
IC8401-⑬
1.0Vp-p REC/PLAY

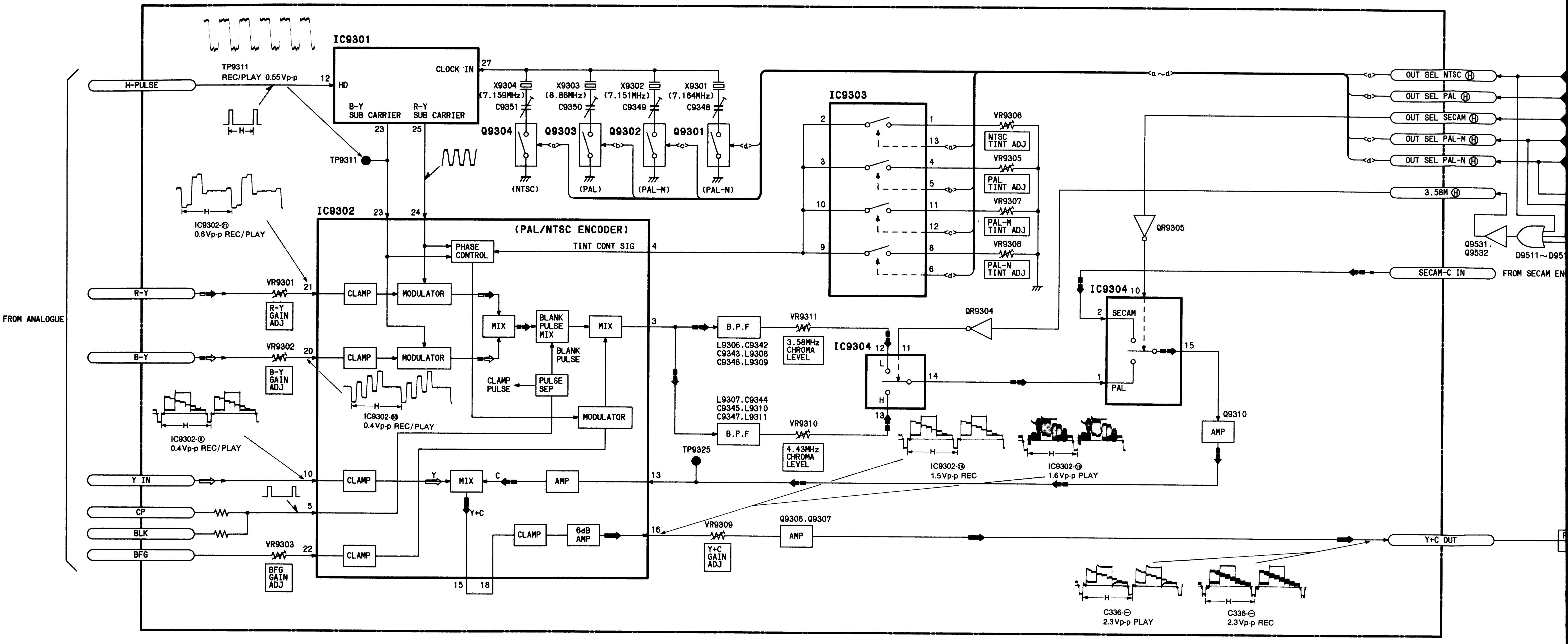
PAL/NTSC ENCODER BLOCK DIAGRAM

R-Y MAIN SIGNAL PATH

CHROMINANCE MAIN SIGNAL PATH

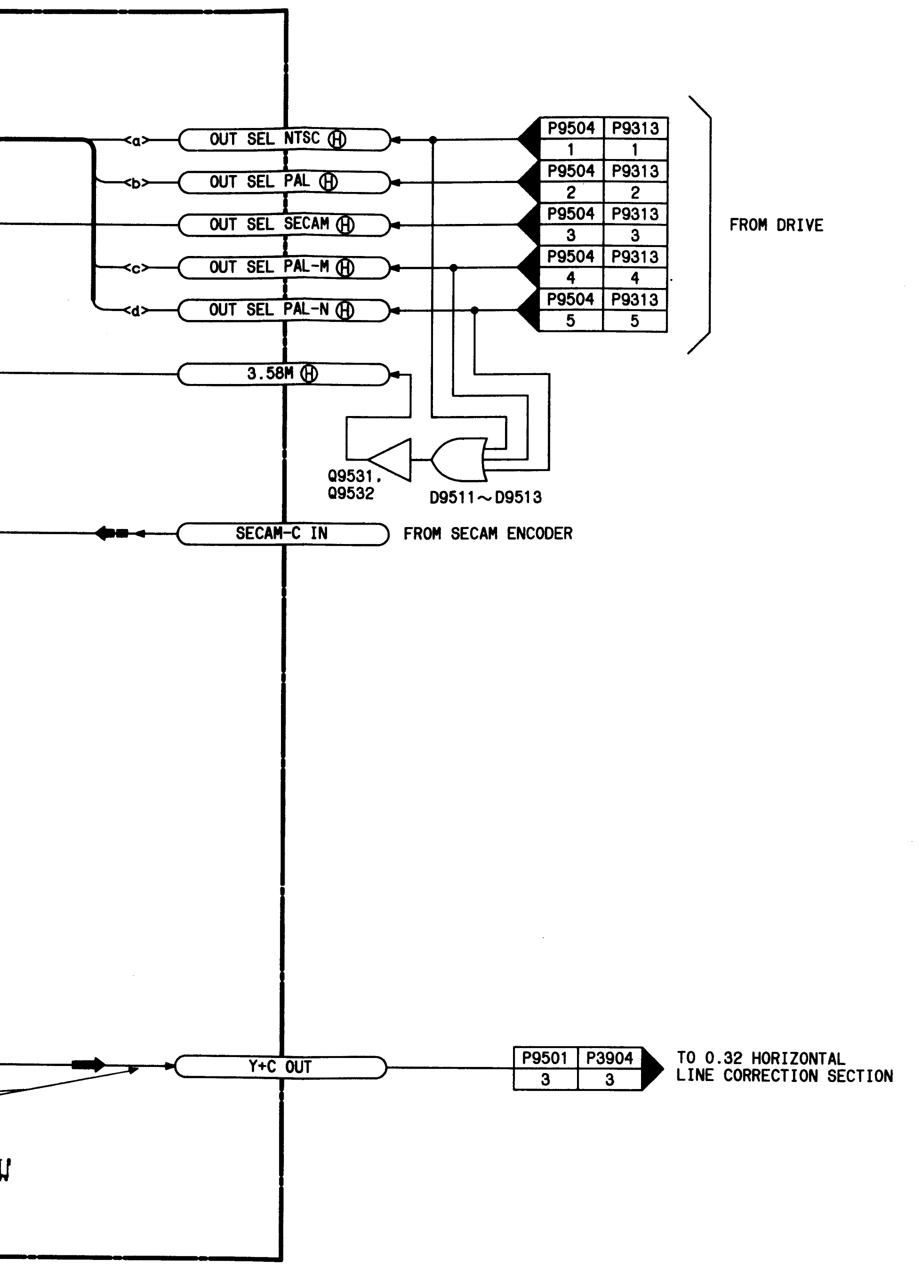
VIDEO MAIN SIGNAL PATH

LUMINANCE MAIN SIGNAL PATH



IC9301
CLOCK IN
HD
B-Y SUB CARRIER
R-Y SUB CARRIER
27
12
23
25
TP9311
REC/PLAY 0.55Vp-p
H
X9304 (7.159MHz)
X9303 (8.86MHz)
X9302 (7.151MHz)
X9301 (7.164MHz)
C9351
C9350
C9349
C9348
Q9304
Q9303
Q9302
Q9301
(NTSC)
(PAL)
(PAL-M)
(PAL-N)
<a>
<b>
<c>
<d>
<a~d>
IC9303
2
3
10
9
1
13
4
5
11
12
8
6
VR9306
NTSC TINT ADJ
VR9305
PAL TINT ADJ
VR9307
PAL-M TINT ADJ
VR9308
PAL-N TINT ADJ
OUT SEL NTSC Ⓗ
OUT SEL PAL Ⓗ
OUT SEL SECAM Ⓗ
OUT SEL PAL-M Ⓗ
OUT SEL PAL-N Ⓗ
3.58M Ⓗ
Q9531, Q9532
D9511~D951
SECAM-C IN
FROM SECAM EN
QR9305
IC9302
(PAL/NTSC ENCODER)
23
24
PHASE CONTROL
TINT CONT SIG
4
IC9302-㉑
0.6Vp-p REC/PLAY
FROM ANALOGUE
H-PULSE
R-Y
B-Y
Y IN
CP
BLK
BFG
VR9301
R-Y GAIN ADJ
21
VR9302
B-Y GAIN ADJ
20
VR9303
BFG GAIN ADJ
22
10
5
IC9302-⑩
0.4Vp-p REC/PLAY
IC9302-⑳
0.4Vp-p REC/PLAY
CLAMP
MODULATOR
MIX
BLANK PULSE MIX
BLANK PULSE
CLAMP PULSE
PULSE SEP
Y
C
Y+C
AMP
6dB AMP
15
18
3
13
16
B.P.F
L9306, C9342
C9343, L9308
C9346, L9309
L9307, C9344
C9345, L9310
C9347, L9311
VR9311
3.58MHz CHROMA LEVEL
VR9310
4.43MHz CHROMA LEVEL
TP9325
IC9304
L
H
12
11
14
13
QR9304
IC9304
10
2
SECAM
1
PAL
15
Q9310
AMP
IC9302-⑬
1.5Vp-p REC
IC9302-⑬
1.6Vp-p PLAY
VR9309
Y+C GAIN ADJ
Q9306, Q9307
AMP
Y+C OUT
C336-⊖
2.3Vp-p PLAY
C336-⊖
2.3Vp-p REC

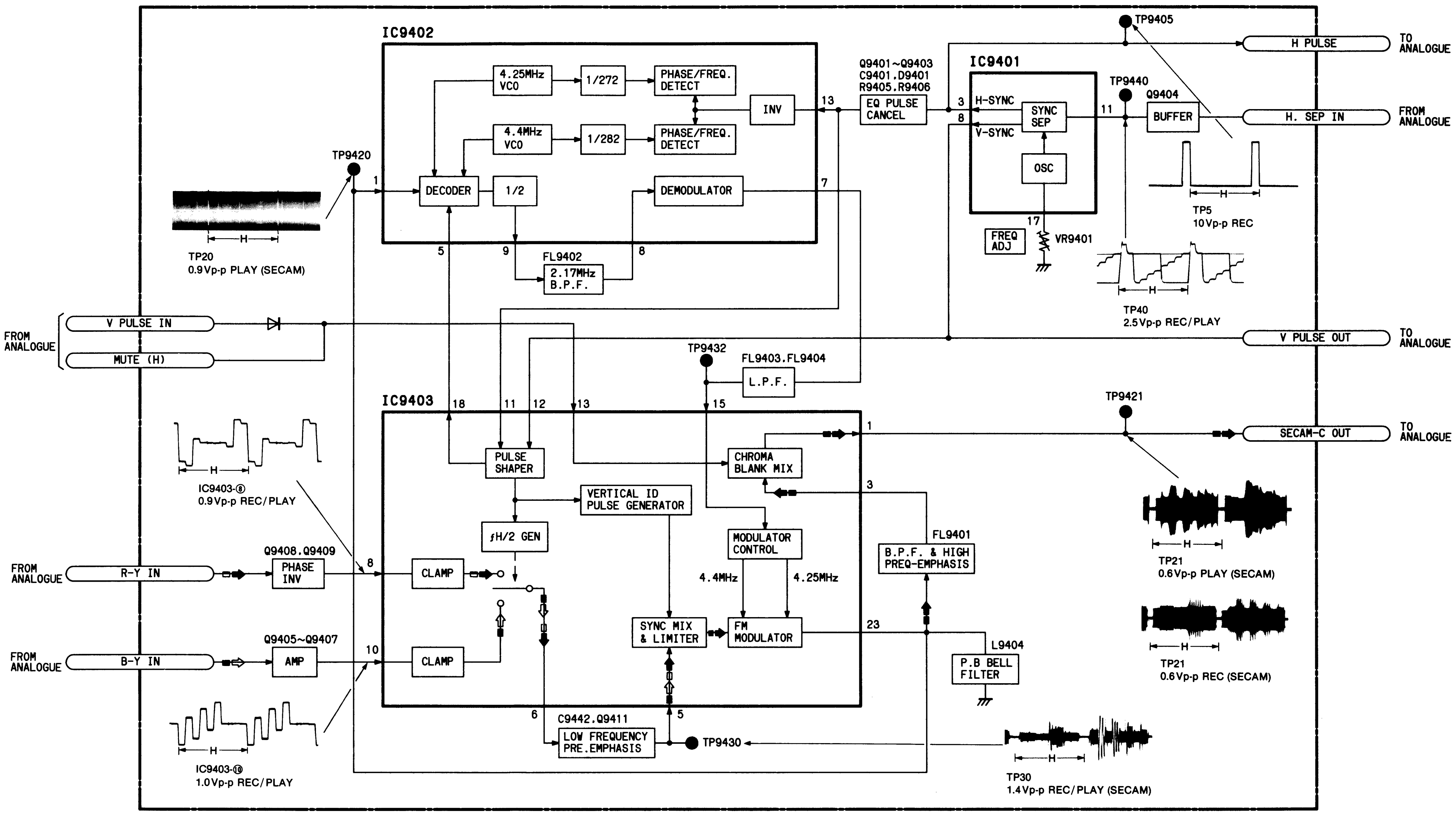
NCE MAIN SIGNAL PATH



<a>
OUT SEL NTSC Ⓗ
<b>
OUT SEL PAL Ⓗ
OUT SEL SECAM Ⓗ
<c>
OUT SEL PAL-M Ⓗ
<d>
OUT SEL PAL-N Ⓗ
P9504 P9313
1 1
P9504 P9313
2 2
P9504 P9313
3 3
P9504 P9313
4 4
P9504 P9313
5 5
FROM DRIVE
3.58M Ⓗ
Q9531,
Q9532
D9511~D9513
SECAM-C IN
FROM SECAM ENCODER
Y+C OUT
P9501 P3904
3 3
TO 0.32 HORIZONTAL
LINE CORRECTION SECTION

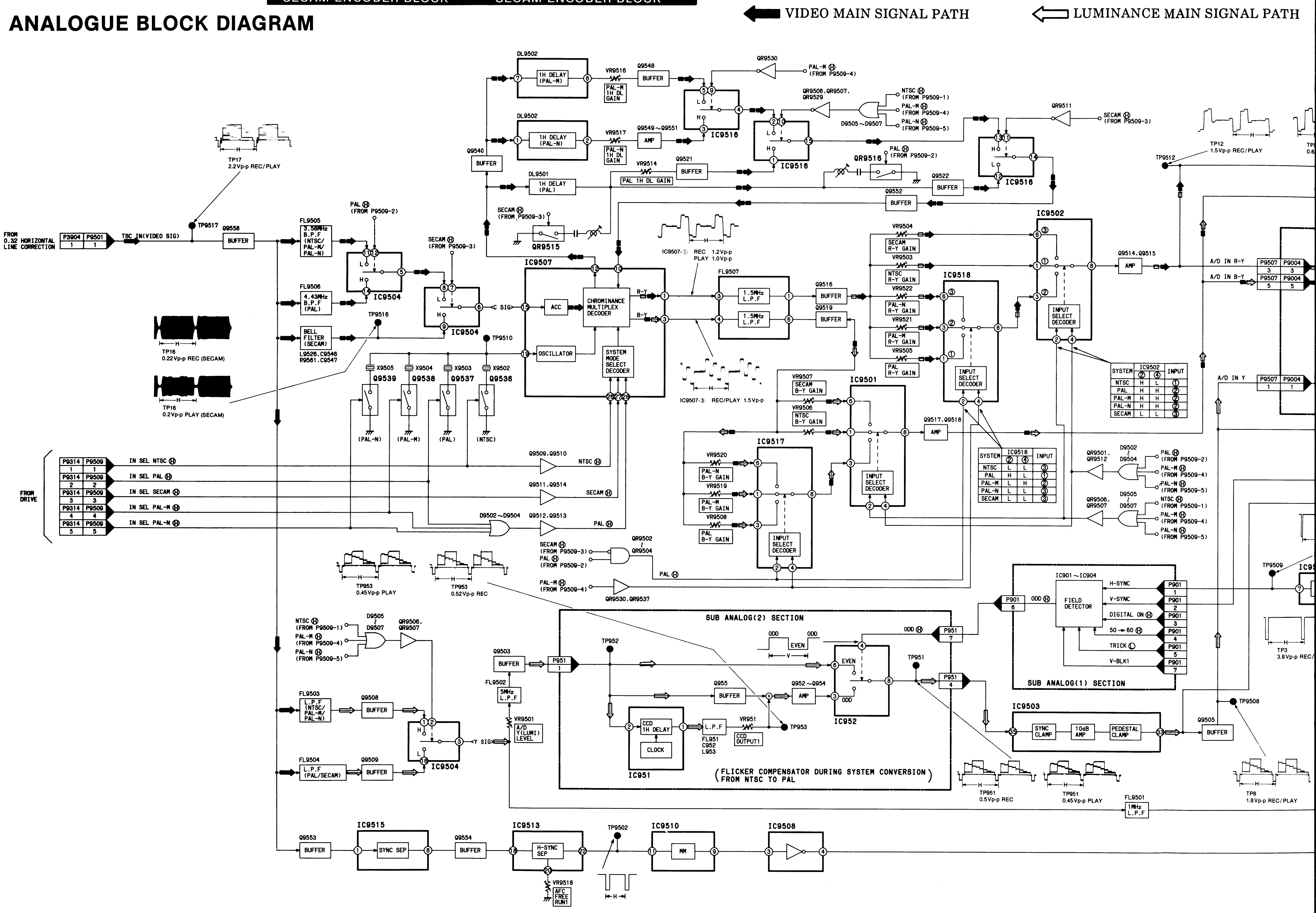
SECAM ENCODER BLOCK DIAGRAM

◀□ R-Y MAIN SIGNAL PATH   ⇦■ B-Y MAIN SIGNAL PATH   ◀■ CHROMINANCE MAIN SIGNAL PATH



IC9402
4.25MHz VCO
1/272
PHASE/FREQ. DETECT
INV
4.4MHz VCO
1/282
PHASE/FREQ. DETECT
DECODER
1/2
DEMODULATOR
FL9402
2.17MHz B.P.F.
TP9420
TP20
0.9Vp-p PLAY (SECAM)
Q9401~Q9403
C9401.D9401
R9405.R9406
EQ PULSE CANCEL
IC9401
H-SYNC
V-SYNC
SYNC SEP
OSC
FREQ ADJ
VR9401
TP9405
TP9440
Q9404
BUFFER
H PULSE
TO ANALOGUE
H. SEP IN
FROM ANALOGUE
TP5
10Vp-p REC
TP40
2.5Vp-p REC/PLAY
FROM ANALOGUE
V PULSE IN
MUTE (H)
V PULSE OUT
TO ANALOGUE
TP9432
FL9403.FL9404
L.P.F.
IC9403
PULSE SHAPER
VERTICAL ID PULSE GENERATOR
fH/2 GEN
CHROMA BLANK MIX
MODULATOR CONTROL
4.4MHz
4.25MHz
SYNC MIX & LIMITER
FM MODULATOR
CLAMP
CLAMP
TP9421
SECAM-C OUT
TO ANALOGUE
TP21
0.6Vp-p PLAY (SECAM)
TP21
0.6Vp-p REC (SECAM)
FL9401
B.P.F. & HIGH PREQ-EMPHASIS
L9404
P.B BELL FILTER
IC9403-⑧
0.9Vp-p REC/PLAY
Q9408.Q9409
PHASE INV
FROM ANALOGUE
R-Y IN
FROM ANALOGUE
B-Y IN
Q9405~Q9407
AMP
IC9403-⑩
1.0Vp-p REC/PLAY
C9442.Q9411
LOW FREQUENCY PRE.EMPHASIS
TP9430
TP30
1.4Vp-p REC/PLAY (SECAM)
H
1
3
5
6
7
8
9
10
11
12
13
15
17
18
23

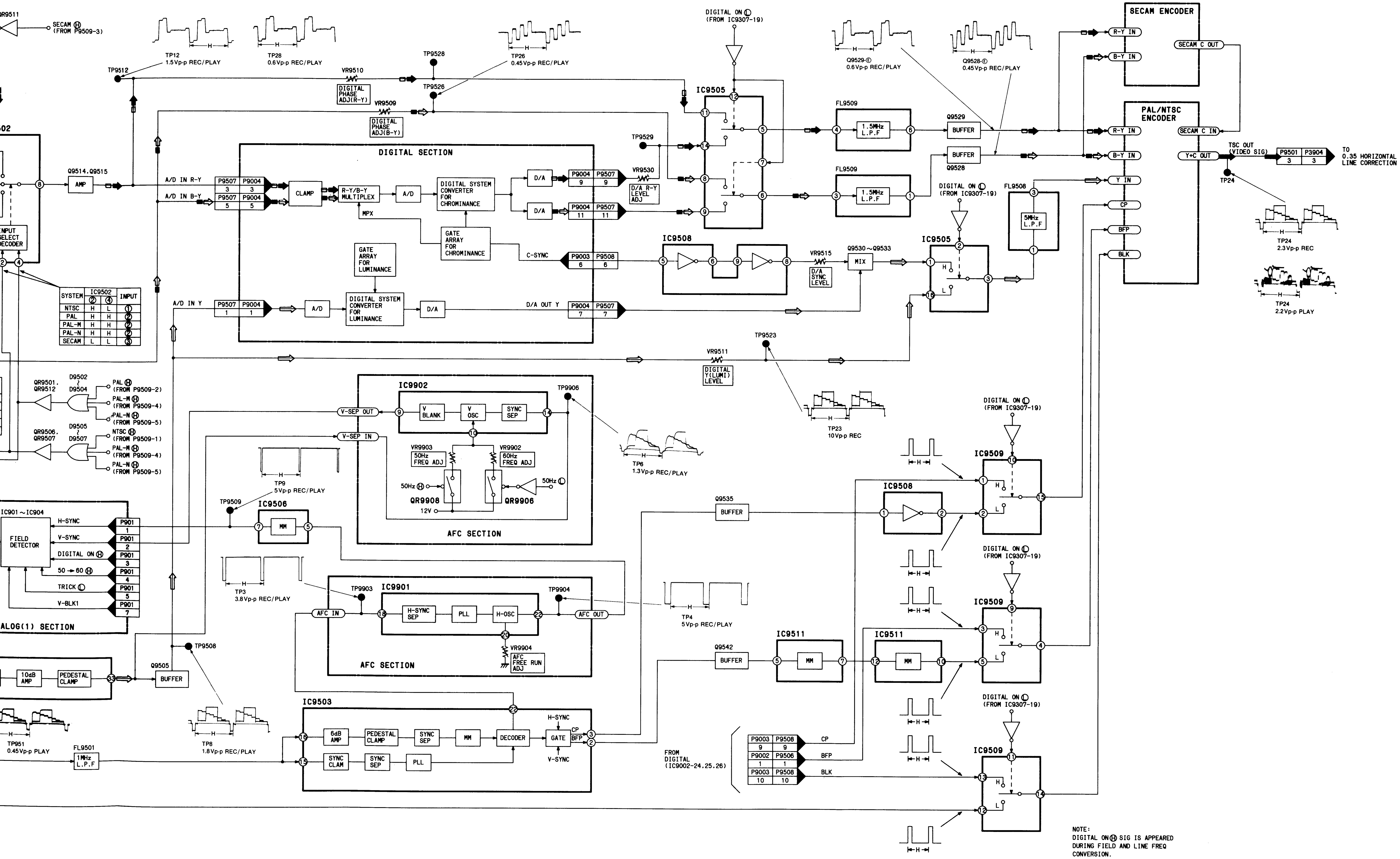
ANALOGUE BLOCK DIAGRAM


VIDEO MAIN SIGNAL PATH
LUMINANCE MAIN SIGNAL PATH
FROM 0.32 HORIZONTAL LINE CORRECTION
P3904 1
P9501 1
TSC IN(VIDEO SIG)
TP9517
TP17 2.2Vp-p REC/PLAY
Q9558 BUFFER
FL9505 3.58MHz B.P.F (NTSC/PAL-M/PAL-N)
FL9506 4.43MHz B.P.F (PAL)
BELL FILTER (SECAM)
L9526.C9546 R9561.C9547
TP9516
TP16 0.22Vp-p REC (SECAM)
TP16 0.2Vp-p PLAY (SECAM)
PAL Ⓗ (FROM P9509-2)
IC9504
SECAM Ⓗ (FROM P9509-3)
C SIG
TP9510
X9505 Q9539
X9504 Q9538
X9503 Q9537
X9502 Q9536
(PAL-N)
(PAL-M)
(PAL)
(NTSC)
DL9502 1H DELAY (PAL-M)
DL9502 1H DELAY (PAL-N)
DL9501 1H DELAY (PAL)
Q9540 BUFFER
SECAM Ⓗ (FROM P9509-3)
QR9515
VR9516 PAL-M 1H DL GAIN
VR9517 PAL-N 1H DL GAIN
VR9514 PAL 1H DL GAIN
Q9548 BUFFER
Q9549～Q9551 AMP
Q9521 BUFFER
IC9516
QR9530
PAL-M Ⓗ (FROM P9509-4)
QR9506.QR9507. QR9529
NTSC Ⓗ (FROM P9509-1)
PAL-M Ⓗ (FROM P9509-4)
PAL-N Ⓗ (FROM P9509-5)
D9505～D9507
QR9516
PAL Ⓗ (FROM P9509-2)
Q9522 BUFFER
Q9552 BUFFER
QR9511
SECAM Ⓗ (FROM P9509-3)
TP9512
TP12 1.5Vp-p REC/PLAY
IC9507
ACC
OSCILLATOR
CHROMINANCE MULTIPLEX DECODER
SYSTEM MODE SELECT DECODER
R-Y
B-Y
IC9507-① REC 1.2Vp-p PLAY 1.0Vp-p
IC9507-③ REC/PLAY 1.5Vp-p
FL9507
1.5MHz L.P.F
Q9516 BUFFER
Q9519 BUFFER
VR9504 SECAM R-Y GAIN
VR9503 NTSC R-Y GAIN
VR9522 PAL-N R-Y GAIN
VR9521 PAL-M R-Y GAIN
VR9505 PAL R-Y GAIN
IC9518
INPUT SELECT DECODER
IC9502
Q9514.Q9515 AMP
A/D IN R-Y
A/D IN B-Y
A/D IN Y
P9507 3
P9004 3
P9507 5
P9004 5
P9507 1
P9004 1
VR9507 SECAM B-Y GAIN
VR9506 NTSC B-Y GAIN
IC9501
Q9517.Q9518 AMP
IC9517
VR9520 PAL-N B-Y GAIN
VR9519 PAL-M B-Y GAIN
VR9508 PAL B-Y GAIN
QR9501. QR9512
D9502～D9504
PAL Ⓗ (FROM P9509-2)
PAL-M Ⓗ (FROM P9509-4)
PAL-N Ⓗ (FROM P9509-5)
QR9506. QR9507
D9505～D9507
NTSC Ⓗ (FROM P9509-1)
PAL-M Ⓗ (FROM P9509-4)
PAL-N Ⓗ (FROM P9509-5)
FROM DRIVE
P9314 P9509 1
P9314 P9509 2
P9314 P9509 3
P9314 P9509 4
P9314 P9509 5
IN SEL NTSC Ⓗ
IN SEL PAL Ⓗ
IN SEL SECAM Ⓗ
IN SEL PAL-M Ⓗ
IN SEL PAL-N Ⓗ
Q9509.Q9510 NTSC Ⓗ
Q9511.Q9514 SECAM Ⓗ
D9502～D9504
Q9512.Q9513 PAL Ⓗ
SECAM Ⓗ (FROM P9509-3)
PAL Ⓗ (FROM P9509-2)
QR9502～QR9504
PAL Ⓗ
PAL-M Ⓗ (FROM P9509-4)
QR9530.QR9537
TP953 0.45Vp-p PLAY
TP953 0.52Vp-p REC
NTSC Ⓗ (FROM P9509-1)
PAL-M Ⓗ (FROM P9509-4)
PAL-N Ⓗ (FROM P9509-5)
D9505～D9507
QR9506. QR9507
FL9503 L.P.F (NTSC/PAL-M/PAL-N)
Q9508 BUFFER
FL9504 L.P.F (PAL/SECAM)
Q9509 BUFFER
IC9504
Y SIG
Q9503 BUFFER
FL9502 5MHz L.P.F
VR9501 A/D Y(LUMI) LEVEL
SUB ANALOG(2) SECTION
P951 1
TP952
ODD EVEN ODD
Q955 BUFFER
Q952～Q954 AMP
EVEN
ODD
IC952
ODD Ⓗ
P951 7
TP951
P951 4
CCD 1H DELAY
CLOCK
IC951
L.P.F
FL951 C952 L953
VR951 CCD OUTPUT1
TP953
(FLICKER COMPENSATOR DURING SYSTEM CONVERSION FROM NTSC TO PAL)
P901 6
ODD Ⓗ
IC901～IC904
FIELD DETECTOR
H-SYNC
V-SYNC
DIGITAL ON Ⓗ
50→60 Ⓗ
TRICK Ⓛ
V-BLK1
P901 1
P901 2
P901 3
P901 4
P901 5
P901 7
SUB ANALOG(1) SECTION
IC9503
SYNC CLAMP
10dB AMP
PEDESTAL CLAMP
Q9505 BUFFER
TP9508
TP9509
TP3 3.8Vp-p REC/
TP951 0.5Vp-p REC
TP951 0.45Vp-p PLAY
TP8 1.8Vp-p REC/PLAY
FL9501 1MHz L.P.F
Q9553 BUFFER
IC9515 SYNC SEP
Q9554 BUFFER
IC9513 H-SYNC SEP
VR9518 AFC FREE RUN1
TP9502
IC9510 MM
IC9508
H

SYSTEM	IC9502		INPUT
	②	④	
NTSC	H	L	①
PAL	H	H	②
PAL-M	H	H	②
PAL-N	H	H	②
SECAM	L	L	③

SYSTEM	IC9518		INPUT
	②	④	
NTSC	L	L	③
PAL	H	L	①
PAL-M	L	H	②
PAL-N	L	L	③
SECAM	L	L	③

▭ LUMINANCE MAIN SIGNAL PATH ◀■ CHROMINANCE MAIN SIGNAL PATH ◀□ R-Y MAIN SIGNAL PATH ⇦■ B-Y MAIN SIGNAL PATH


QR9511
SECAM Ⓗ (FROM P9509-3)
TP12 1.5Vp-p REC/PLAY
TP28 0.6Vp-p REC/PLAY
TP26 0.45Vp-p REC/PLAY
TP9512
TP9528
TP9526
VR9510
DIGITAL PHASE ADJ(R-Y)
VR9509
DIGITAL PHASE ADJ(B-Y)
DIGITAL ON Ⓛ (FROM IC9307-19)
IC9505
Q9529-Ⓔ 0.6Vp-p REC/PLAY
Q9528-Ⓔ 0.45Vp-p REC/PLAY
SECAM ENCODER
R-Y IN
B-Y IN
SECAM C OUT
PAL/NTSC ENCODER
SECAM C IN
Y+C OUT
Y IN
CP
BFP
BLK
TSC OUT (VIDEO SIG)
P9501 P3904 3 3
TO 0.35 HORIZONTAL LINE CORRECTION
TP24
TP24 2.3Vp-p REC
TP24 2.2Vp-p PLAY
FL9509
1.5MHz L.P.F
Q9529
Q9528
BUFFER
FL9508
5MHz L.P.F
Q9514.Q9515
AMP
A/D IN R-Y
A/D IN B-Y
A/D IN Y
DIGITAL SECTION
P9507 P9004
CLAMP
R-Y/B-Y MULTIPLEX
MPX
A/D
D/A
DIGITAL SYSTEM CONVERTER FOR CHROMINANCE
GATE ARRAY FOR CHROMINANCE
GATE ARRAY FOR LUMINANCE
DIGITAL SYSTEM CONVERTER FOR LUMINANCE
C-SYNC
D/A OUT Y
P9003 P9508
TP9529
VR9530
D/A R-Y LEVEL ADJ
IC9508
VR9515
D/A SYNC LEVEL
Q9530～Q9533
MIX
TP9523
VR9511
DIGITAL Y(LUMI) LEVEL
TP23 10Vp-p REC
INPUT SELECT DECODER
SYSTEM | IC9502 ② ④ | INPUT
NTSC | H L | ①
PAL | H H | ②
PAL-M | H H | ②
PAL-N | H H | ②
SECAM | L L | ③
QR9501, QR9512
D9502 / D9504
PAL Ⓗ (FROM P9509-2)
PAL-M Ⓗ (FROM P9509-4)
PAL-N Ⓗ (FROM P9509-5)
QR9506, QR9507
D9505 / D9507
NTSC Ⓗ (FROM P9509-1)
PAL-M Ⓗ (FROM P9509-4)
PAL-N Ⓗ (FROM P9509-5)
IC9902
V-SEP OUT
V-SEP IN
V BLANK
V OSC
SYNC SEP
TP9906
TP6 1.3Vp-p REC/PLAY
VR9903 50Hz FREQ ADJ
VR9902 60Hz FREQ ADJ
50Hz Ⓗ
50Hz Ⓛ
QR9908
QR9906
12V
AFC SECTION
TP9 5Vp-p REC/PLAY
TP9509
IC9506
MM
IC901～IC904
FIELD DETECTOR
H-SYNC
V-SYNC
DIGITAL ON Ⓗ
50 → 60 Ⓗ
TRICK Ⓛ
V-BLK1
P901
ALOG(1) SECTION
TP3 3.8Vp-p REC/PLAY
IC9901
TP9903
TP9904
AFC IN
H-SYNC SEP
PLL
H-OSC
AFC OUT
VR9904
AFC FREE RUN ADJ
TP4 5Vp-p REC/PLAY
10dB AMP
PEDESTAL CLAMP
Q9505
BUFFER
TP9508
TP951 0.45Vp-p PLAY
FL9501
1MHz L.P.F
TP8 1.8Vp-p REC/PLAY
IC9503
6dB AMP
PEDESTAL CLAMP
SYNC SEP
MM
DECODER
GATE
H-SYNC
V-SYNC
CP
BFP
SYNC CLAM
SYNC SEP
PLL
Q9535
BUFFER
Q9542
IC9511
IC9509
FROM DIGITAL (IC9002-24.25.26)
P9003 P9508 9 9 CP
P9002 P9506 1 1 BFP
P9003 P9508 10 10 BLK
H

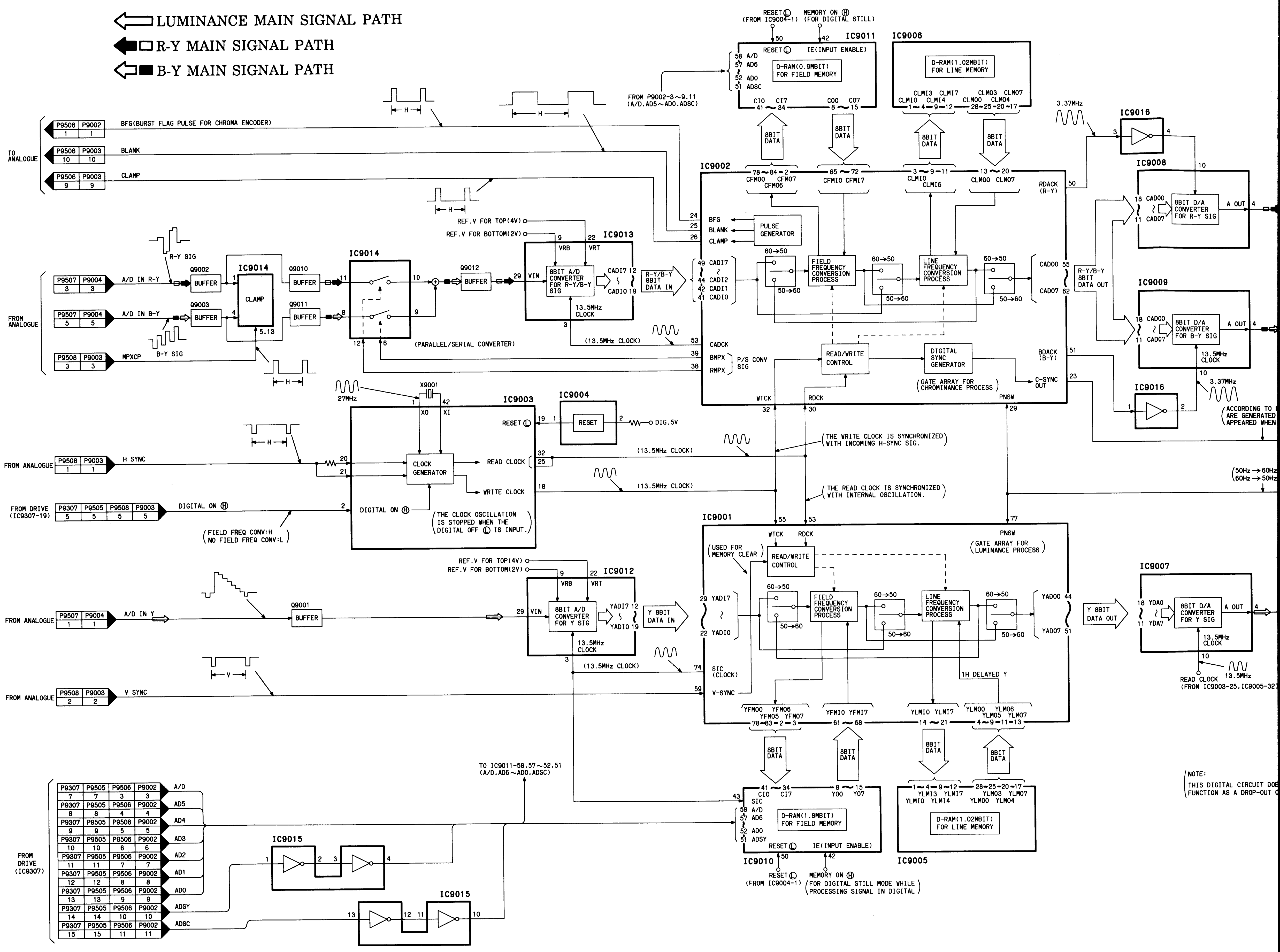
NOTE:
DIGITAL ON Ⓗ SIG IS APPEARED DURING FIELD AND LINE FREQ CONVERSION.

DIGITAL BLOCK DIAGRAM

⇦ LUMINANCE MAIN SIGNAL PATH

◀□ R-Y MAIN SIGNAL PATH

⇦■ B-Y MAIN SIGNAL PATH

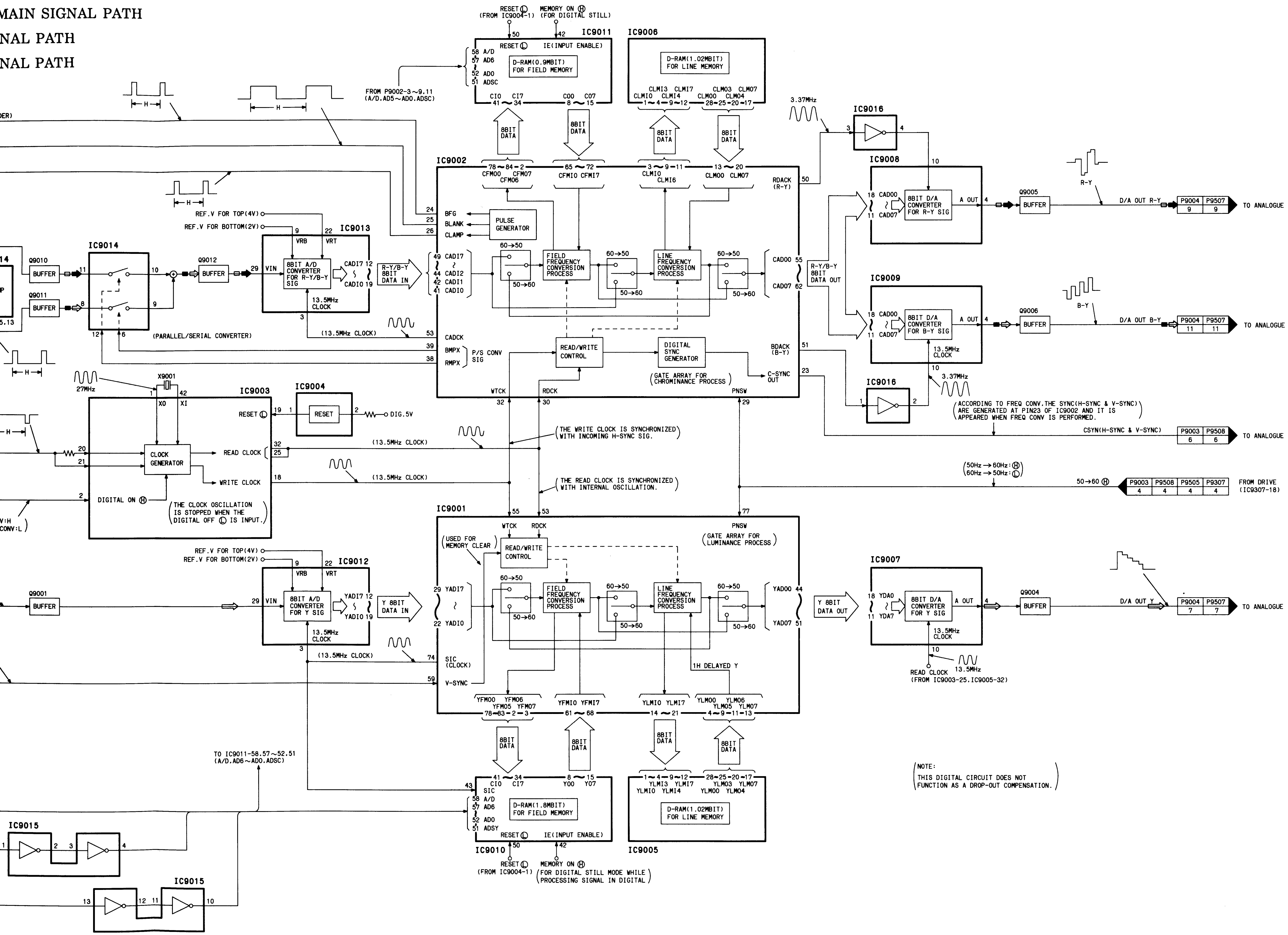

TO ANALOGUE
P9506 P9002 1 1 BFG(BURST FLAG PULSE FOR CHROMA ENCODER)
P9508 P9003 10 10 BLANK
P9506 P9003 9 9 CLAMP
FROM ANALOGUE
P9507 P9004 3 3 A/D IN R-Y
P9507 P9004 5 5 A/D IN B-Y
P9508 P9003 3 3 MPXCP
R-Y SIG
B-Y SIG
Q9002 BUFFER
Q9003 BUFFER
IC9014 CLAMP
5.13
Q9010 BUFFER
Q9011 BUFFER
IC9014
(PARALLEL/SERIAL CONVERTER)
Q9012 BUFFER
REF.V FOR TOP(4V)
REF.V FOR BOTTOM(2V)
IC9013
VRB VRT
8BIT A/D CONVERTER FOR R-Y/B-Y SIG
CADI7 12
CADI0 19
13.5MHz CLOCK
R-Y/B-Y 8BIT DATA IN
(13.5MHz CLOCK)
27MHz
X9001
XO XI
IC9003
RESET Ⓛ
CLOCK GENERATOR
READ CLOCK
WRITE CLOCK
DIGITAL ON Ⓗ
THE CLOCK OSCILLATION IS STOPPED WHEN THE DIGITAL OFF Ⓛ IS INPUT.
IC9004
RESET
DIG.5V
FROM ANALOGUE P9508 P9003 1 1 H SYNC
FROM DRIVE (IC9307-19) P9307 P9505 P9508 P9003 5 5 5 5 DIGITAL ON Ⓗ
(FIELD FREQ CONV:H NO FIELD FREQ CONV:L)
(13.5MHz CLOCK)
(13.5MHz CLOCK)
IC9012
8BIT A/D CONVERTER FOR Y SIG
YADI7 12
YADI0 19
Y 8BIT DATA IN
FROM ANALOGUE P9507 P9004 1 1 A/D IN Y
Q9001 BUFFER
FROM ANALOGUE P9508 P9003 2 2 V SYNC
(13.5MHz CLOCK)
TO IC9011-58.57~52.51 (A/D.AD6~AD0.ADSC)
FROM DRIVE (IC9307)
P9307 P9505 P9506 P9002 7 7 3 3 A/D
P9307 P9505 P9506 P9002 8 8 4 4 AD5
P9307 P9505 P9506 P9002 9 9 5 5 AD4
P9307 P9505 P9506 P9002 10 10 6 6 AD3
P9307 P9505 P9506 P9002 11 11 7 7 AD2
P9307 P9505 P9506 P9002 12 12 8 8 AD1
P9307 P9505 P9506 P9002 13 13 9 9 AD0
P9307 P9505 P9506 P9002 14 14 10 10 ADSY
P9307 P9505 P9506 P9002 15 15 11 11 ADSC
IC9015
IC9015
RESET Ⓛ (FROM IC9004-1)
MEMORY ON Ⓗ (FOR DIGITAL STILL)
IC9011
RESET Ⓛ IE(INPUT ENABLE)
58 A/D 57 AD6 52 AD0 51 ADSC
D-RAM(0.9MBIT) FOR FIELD MEMORY
CI0 CI7 41 ~ 34
CO0 CO7 8 ~ 15
FROM P9002-3~9.11 (A/D.AD5~AD0.ADSC)
IC9006
D-RAM(1.02MBIT) FOR LINE MEMORY
CLMI3 CLMI7 CLMI0 CLMI4 1~4~9~12
CLMO3 CLMO7 CLMO0 CLMO4 28~25~20~17
8BIT DATA
IC9002
78~84~2 CFMO0 CFMO7 CFMO6
65 ~ 72 CFMI0 CFMI7
3 ~ 9 ~ 11 CLMI0 CLMI6
13 ~ 20 CLMO0 CLMO7
BFG BLANK CLAMP
PULSE GENERATOR
49 CADI7 44 CADI2 42 CADI1 41 CADI0
60→50
50→60
FIELD FREQUENCY CONVERSION PROCESS
LINE FREQUENCY CONVERSION PROCESS
CADO0 55
CADO7 62
R-Y/B-Y 8BIT DATA OUT
CADCK
BMPX RMPX P/S CONV SIG
READ/WRITE CONTROL
DIGITAL SYNC GENERATOR
(GATE ARRAY FOR CHROMINANCE PROCESS)
RDACK (R-Y)
BDACK (B-Y)
C-SYNC OUT
WTCK RDCK PNSW
3.37MHz
IC9016
IC9008
8BIT D/A CONVERTER FOR R-Y SIG
A OUT
IC9009
8BIT D/A CONVERTER FOR B-Y SIG
13.5MHz CLOCK
3.37MHz
IC9016
(ACCORDING TO ARE GENERATED APPEARED WHEN
(THE WRITE CLOCK IS SYNCHRONIZED WITH INCOMING H-SYNC SIG.)
(THE READ CLOCK IS SYNCHRONIZED WITH INTERNAL OSCILLATION.)
(50Hz→60Hz (60Hz→50Hz
IC9001
WTCK RDCK PNSW
(USED FOR MEMORY CLEAR)
READ/WRITE CONTROL
(GATE ARRAY FOR LUMINANCE PROCESS)
29 YADI7 22 YADI0
SIC (CLOCK)
V-SYNC
FIELD FREQUENCY CONVERSION PROCESS
LINE FREQUENCY CONVERSION PROCESS
1H DELAYED Y
YADO0 44
YADO7 51
Y 8BIT DATA OUT
YFMO0 YFMO6 YFMO5 YFMO7 78~83~2~3
YFMI0 YFMI7 61 ~ 68
YLMI0 YLMI7 14 ~ 21
YLMO0 YLMO6 YLMO5 YLMO7 4~9~11~13
IC9007
18 YDA0 11 YDA7
8BIT D/A CONVERTER FOR Y SIG
A OUT
13.5MHz CLOCK
READ CLOCK 13.5MHz (FROM IC9003-25.IC9005-32
41 ~ 34 CI0 CI7
8 ~ 15 YO0 YO7
SIC
58 A/D 57 AD6 52 AD0 51 ADSY
D-RAM(1.8MBIT) FOR FIELD MEMORY
RESET Ⓛ IE(INPUT ENABLE)
IC9010
RESET Ⓛ (FROM IC9004-1)
MEMORY ON Ⓗ (FOR DIGITAL STILL MODE WHILE PROCESSING SIGNAL IN DIGITAL)
1~4~9~12 YLMI3 YLMI7 YLMI0 YLMI4
28~25~20~17 YLMO3 YLMO7 YLMO0 YLMO4
D-RAM(1.02MBIT) FOR LINE MEMORY
IC9005
NOTE: THIS DIGITAL CIRCUIT DO FUNCTION AS A DROP-OUT

RAM

MAIN SIGNAL PATH

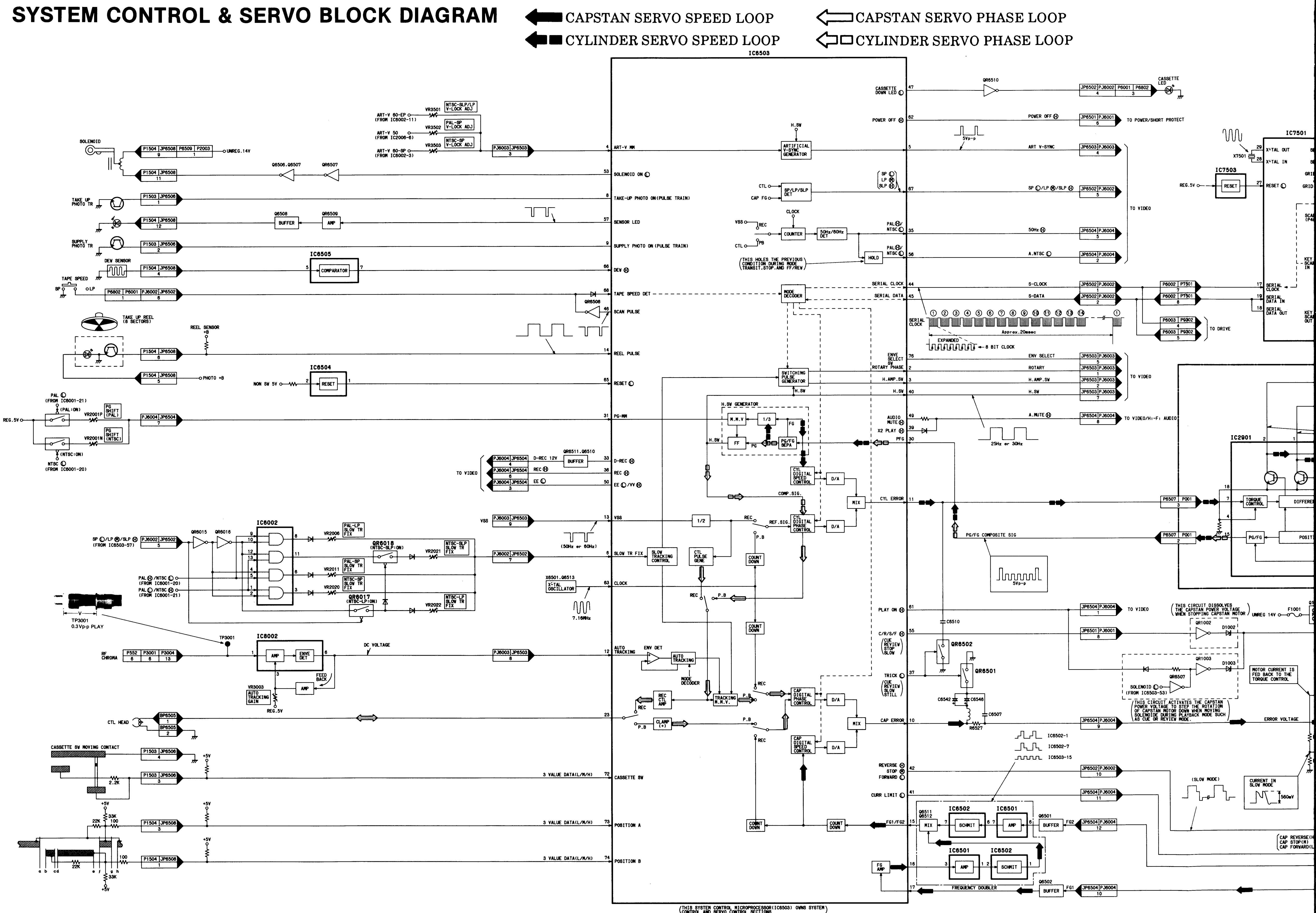
NAL PATH

NAL PATH


IC9011
RESET Ⓛ (FROM IC9004-1)
MEMORY ON Ⓗ (FOR DIGITAL STILL)
IE(INPUT ENABLE)
58 A/D
57 AD6
52 AD0
51 ADSC
D-RAM(0.9MBIT) FOR FIELD MEMORY
CI0 CI7 41 ~ 34
CO0 CO7 8 ~ 15
FROM P9002-3~9.11 (A/D.AD5~AD0.ADSC)
IC9006
D-RAM(1.02MBIT) FOR LINE MEMORY
CLMI0 CLMI3 CLMI4 CLMI7 1~4~9~12
CLMO0 CLMO3 CLMO4 CLMO7 28~25~20~17
8BIT DATA
IC9002
78~84~2 CFMO0 CFMO6 CFMO7
65 ~ 72 CFMI0 CFMI7
3~9~11 CLMI0 CLMI6
13 ~ 20 CLMO0 CLMO7
RDACK (R-Y)
BFG
BLANK
CLAMP
PULSE GENERATOR
CADI7 CADI2 CADI1 CADI0
60→50
50→60
FIELD FREQUENCY CONVERSION PROCESS
LINE FREQUENCY CONVERSION PROCESS
CAD00 CAD07
CADCK
BMPX
RMPX
P/S CONV SIG
READ/WRITE CONTROL
DIGITAL SYNC GENERATOR
(GATE ARRAY FOR CHROMINANCE PROCESS)
BDACK (B-Y)
C-SYNC OUT
WTCK RDCK PNSW
R-Y/B-Y 8BIT DATA IN
R-Y/B-Y 8BIT DATA OUT
IC9013
REF.V FOR TOP(4V)
REF.V FOR BOTTOM(2V)
VRB VRT VIN
8BIT A/D CONVERTER FOR R-Y/B-Y SIG
13.5MHz CLOCK
(13.5MHz CLOCK)
IC9014
Q9010 BUFFER
Q9011 BUFFER
Q9012 BUFFER
(PARALLEL/SERIAL CONVERTER)
X9001 27MHz
IC9003
XO XI
RESET Ⓛ
CLOCK GENERATOR
READ CLOCK
WRITE CLOCK
DIGITAL ON Ⓗ
(THE CLOCK OSCILLATION IS STOPPED WHEN THE DIGITAL OFF Ⓛ IS INPUT.)
IC9004
RESET
DIG.5V
(13.5MHz CLOCK)
(THE WRITE CLOCK IS SYNCHRONIZED WITH INCOMING H-SYNC SIG.)
(THE READ CLOCK IS SYNCHRONIZED WITH INTERNAL OSCILLATION.)
3.37MHz
IC9016
IC9008
CAD00 CAD07
8BIT D/A CONVERTER FOR R-Y SIG
A OUT
Q9005 BUFFER
R-Y
D/A OUT R-Y
P9004 P9507 9 9
TO ANALOGUE
IC9009
8BIT D/A CONVERTER FOR B-Y SIG
13.5MHz CLOCK
Q9006 BUFFER
B-Y
D/A OUT B-Y
P9004 P9507 11 11
TO ANALOGUE
IC9016
3.37MHz
(ACCORDING TO FREQ CONV.THE SYNC(H-SYNC & V-SYNC) ARE GENERATED AT PIN23 OF IC9002 AND IT IS APPEARED WHEN FREQ CONV IS PERFORMED.)
CSYN(H-SYNC & V-SYNC)
P9003 P9508 6 6
TO ANALOGUE
(50Hz→60Hz:Ⓗ 60Hz→50Hz:Ⓛ)
50→60 Ⓗ
P9003 P9508 P9505 P9307 4 4 4 4
FROM DRIVE (IC9307-18)
IC9001
WTCK RDCK PNSW
(USED FOR MEMORY CLEAR)
READ/WRITE CONTROL
(GATE ARRAY FOR LUMINANCE PROCESS)
YADI7 YADI0
FIELD FREQUENCY CONVERSION PROCESS
LINE FREQUENCY CONVERSION PROCESS
YAD00 YAD07
SIC (CLOCK)
V-SYNC
1H DELAYED Y
YFMO0 YFMO5 YFMO6 YFMO7 78~83~2~3
YFMI0 YFMI7 61 ~ 68
YLMI0 YLMI7 14 ~ 21
YLMO0 YLMO5 YLMO6 YLMO7 4~9~11~13
IC9012
REF.V FOR TOP(4V)
REF.V FOR BOTTOM(2V)
8BIT A/D CONVERTER FOR Y SIG
13.5MHz CLOCK
(13.5MHz CLOCK)
Q9001 BUFFER
Y 8BIT DATA IN
Y 8BIT DATA OUT
IC9007
YDA0 YDA7
8BIT D/A CONVERTER FOR Y SIG
13.5MHz CLOCK
READ CLOCK (FROM IC9003-25.IC9005-32)
13.5MHz
Q9004 BUFFER
D/A OUT Y
P9004 P9507 7 7
TO ANALOGUE
TO IC9011-58.57~52.51 (A/D.AD6~AD0.ADSC)
IC9010
CI0 CI7 41 ~ 34
Y00 Y07 8 ~ 15
SIC
A/D AD6 AD0 ADSY
D-RAM(1.8MBIT) FOR FIELD MEMORY
RESET Ⓛ IE(INPUT ENABLE)
RESET Ⓛ (FROM IC9004-1)
MEMORY ON Ⓗ (FOR DIGITAL STILL MODE WHILE PROCESSING SIGNAL IN DIGITAL)
IC9005
YLMI0 YLMI3 YLMI4 YLMI7 1~4~9~12
YLMO0 YLMO3 YLMO4 YLMO7 28~25~20~17
D-RAM(1.02MBIT) FOR LINE MEMORY
IC9015
IC9015

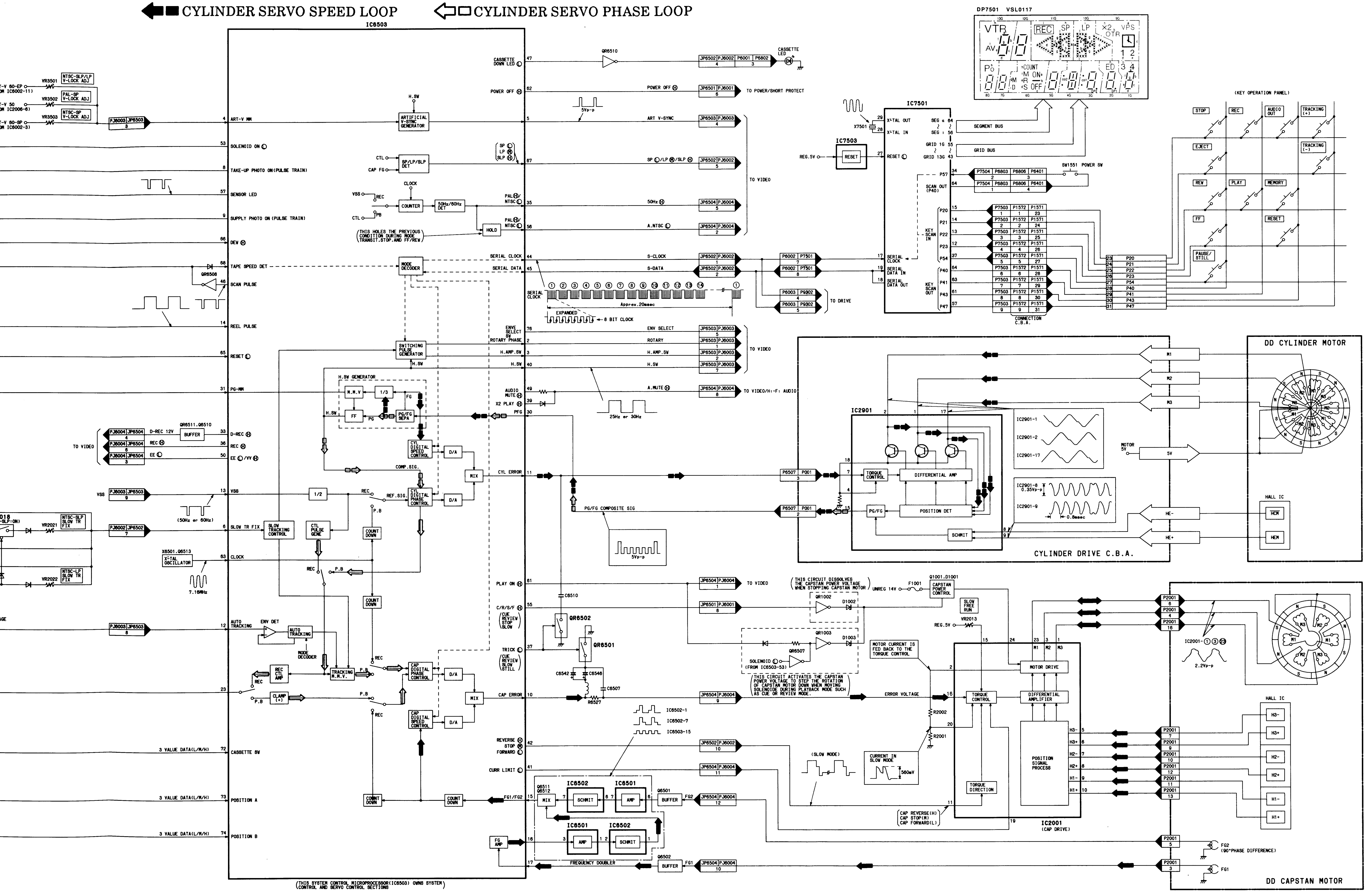
(NOTE:
THIS DIGITAL CIRCUIT DOES NOT FUNCTION AS A DROP-OUT COMPENSATION.)

SYSTEM CONTROL & SERVO BLOCK DIAGRAM


CAPSTAN SERVO SPEED LOOP
CYLINDER SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO PHASE LOOP
IC6503
SOLENOID
UNREG.14V
TAKE UP PHOTO TR
SUPPLY PHOTO TR
DEW SENSOR
TAPE SPEED
SP
LP
TAKE UP REEL (8 SECTORS)
REEL SENSOR
PHOTO +B
IC6505
COMPARATOR
IC6504
RESET
NON SW 5V
REG.5V
PAL (FROM IC6001-21)
NTSC (FROM IC6001-20)
VR2001P
VR2001N
PG SHIFT (PAL)
PG SHIFT (NTSC)
ART-V 60-EP (FROM IC6002-11)
ART-V 50 (FROM IC2006-6)
ART-V 60-SP (FROM IC6002-3)
VR3501
VR3502
VR3503
NTSC-SLP/LP V-LOCK ADJ
PAL-SP V-LOCK ADJ
NTSC-SP V-LOCK ADJ
Q6506,Q6507
QR6507
Q6508
QR6509
BUFFER
AMP
TO VIDEO
D-REC 12V
REC
EE
QR6511,Q6510
VSS
(50Hz or 60Hz)
SP/LP/SLP (FROM IC6503-57)
QR6015
QR6016
IC6002
VR2006
VR2011
VR2020
VR2021
VR2022
QR6018 (NTSC-SLP:ON)
QR6017 (NTSC-LP:ON)
PAL-LP SLOW TR FIX
PAL-SP SLOW TR FIX
NTSC-SP SLOW TR FIX
NTSC-SLP SLOW TR FIX
NTSC-LP SLOW TR FIX
X6501,Q6513
X-TAL OSCILLATOR
7.16MHz
TP3001
0.3Vp-p PLAY
RF CHROMA
ENVE DET
DC VOLTAGE
FEED BACK
VR3003
AUTO TRACKING GAIN
CTL HEAD
CASSETTE SW MOVING CONTACT
3 VALUE DATA(L/M/H)
ART-V MM
SOLENOID ON
TAKE-UP PHOTO ON(PULSE TRAIN)
SENSOR LED
SUPPLY PHOTO ON (PULSE TRAIN)
DEW
TAPE SPEED DET
SCAN PULSE
REEL PULSE
RESET
PG-MM
D-REC
EE/VV
SLOW TR FIX
CLOCK
AUTO TRACKING
CASSETTE SW
POSITION A
POSITION B
H.SW
ARTIFICIAL V-SYNC GENERATOR
SP/LP/SLP DET
CAP FG
CTL
COUNTER
50Hz/60Hz DET
HOLD
(THIS HOLDS THE PREVIOUS CONDITION DURING MODE TRANSIT.STOP.AND FF/REW)
MODE DECODER
SWITCHING PULSE GENERATOR
H.SW GENERATOR
M.M.V
1/3
FF
PG
FG
PG/FG SEPA
CYL DIGITAL SPEED CONTROL
CYL DIGITAL PHASE CONTROL
D/A
MIX
COMP.SIG.
REF.SIG.
1/2
P.B
COUNT DOWN
SLOW TRACKING CONTROL
CTL PULSE GENE
ENV DET
TRACKING M.M.V.
REC CTL AMP
CLAMP (+)
CAP DIGITAL PHASE CONTROL
CAP DIGITAL SPEED CONTROL
FG AMP
CASSETTE DOWN LED
POWER OFF
SP/LP/SLP
PAL/NTSC
SERIAL CLOCK
SERIAL DATA
ENVE SELECT SW
ROTARY PHASE
H.AMP.SW
AUDIO MUTE
X2 PLAY
PFG
CYL ERROR
PLAY ON
C/R/S/F (CUE REVIEW STOP SLOW)
TRICK (CUE REVIEW SLOW STILL)
CAP ERROR
REVERSE STOP FORWARD
CURR LIMIT
FG1/FG2
FREQUENCY DOUBLER
(THIS SYSTEM CONTROL MICROPROCESSOR(IC6503) OWNS SYSTEM CONTROL AND SERVO CONTROL SECTIONS)
QR6510
CASSETTE LED
5Vp-p
ART V-SYNC
TO POWER/SHORT PROTECT
TO VIDEO
S-CLOCK
S-DATA
TO DRIVE
SERIAL CLOCK
EXPANDED
8 BIT CLOCK
Approx.20msec
ENV SELECT
ROTARY
H.AMP.SW
A.MUTE
TO VIDEO/Hi-Fi AUDIO
25Hz or 30Hz
PG/FG COMPOSITE SIG
C6510
QR6502
QR6501
C6542
C6546
C6507
R6527
IC6502-1
IC6502-7
IC6503-15
Q6511 Q6512
IC6502
IC6501
SCHMIT
Q6501
Q6502
IC7501
X7501
X-TAL OUT
X-TAL IN
IC7503
RESET
SERIAL CLOCK
SERIAL DATA IN
SERIAL DATA OUT
IC2901
TORQUE CONTROL
PG/FG
(THIS CIRCUIT DISSOLVES THE CAPSTAN POWER VOLTAGE WHEN STOPPING CAPSTAN MOTOR)
UNREG 14V
F1001
QR1002
D1002
QR1003
D1003
SOLENOID (FROM IC6503-53)
(THIS CIRCUIT ACTIVATES THE CAPSTAN POWER VOLTAGE TO STEP THE ROTATION OF CAPSTAN MOTOR DOWN WHEN MOVING SOLENOIDE DURING PLAYBACK MODE SUCH AS CUE OR REVIEW MODE.)
MOTOR CURRENT IS FED BACK TO THE TORQUE CONTROL
ERROR VOLTAGE
(SLOW MODE)
CURRENT IN SLOW MODE
560mV
CAP REVERSE(H) CAP STOP(M) CAP FORWARD(L)

K DIAGRAM

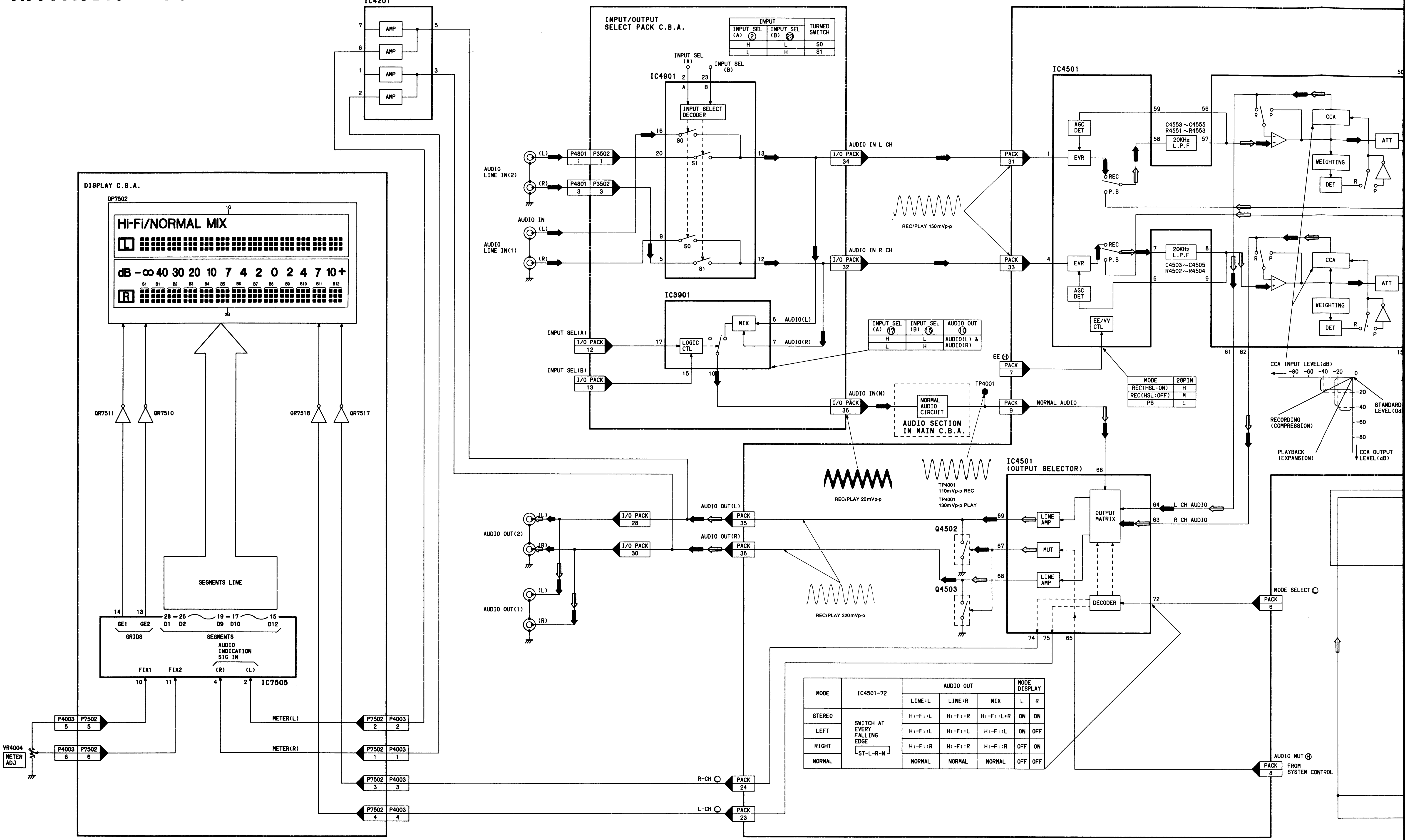
◀■ CAPSTAN SERVO SPEED LOOP
◀■ CYLINDER SERVO SPEED LOOP
◁□ CAPSTAN SERVO PHASE LOOP
◁□ CYLINDER SERVO PHASE LOOP


IC6503
CASSETTE DOWN LED
POWER OFF
ART-V MM
SOLENOID ON
TAKE-UP PHOTO ON (PULSE TRAIN)
SENSOR LED
SUPPLY PHOTO ON (PULSE TRAIN)
DEV
TAPE SPEED DET
SCAN PULSE
REEL PULSE
RESET
PG-MM
D-REC
REC
EE
VSS
SLOW TR FIX
CLOCK
AUTO TRACKING
CASSETTE SW
POSITION A
POSITION B
3 VALUE DATA(L/M/H)
VR3501
VR3502
VR3503
NTSC-SLP/LP V-LOCK ADJ
PAL-SP V-LOCK ADJ
NTSC-SP V-LOCK ADJ
VR2021
VR2022
NTSC-SLP SLOW TR FIX
NTSC-LP SLOW TR FIX
TO VIDEO
D-REC 12V
BUFFER
QR6511,Q6510
X6501,Q6513
X-TAL OSCILLATOR
7.16MHz
(50Hz or 60Hz)
ARTIFICIAL V-SYNC GENERATOR
H.SW
SP/LP/SLP DET
CTL
CAP FG
CLOCK
COUNTER
50Hz/60Hz DET
HOLD
(THIS HOLES THE PREVIOUS CONDITION DURING MODE TRANSIT,STOP,AND FF/REW)
MODE DECODER
SWITCHING PULSE GENERATOR
H.SW GENERATOR
M.M.V
1/3
FF
PG/FG SEPA
CYL DIGITAL SPEED CONTROL
CYL DIGITAL PHASE CONTROL
COMP.SIG.
REF.SIG
D/A
MIX
1/2
SLOW TRACKING CONTROL
CTL PULSE GENE
COUNT DOWN
ENV DET
AUTO TRACKING
MODE DECODER
TRACKING M.M.V.
REC CTL AMP
CLAMP (+)
CAP DIGITAL PHASE CONTROL
CAP DIGITAL SPEED CONTROL
CYL ERROR
CAP ERROR
5Vp-p
SERIAL CLOCK
SERIAL DATA
SERIAL CLOCK
EXPANDED
8 BIT CLOCK
Approx.20msec
ENVE SELECT
ROTARY PHASE
H.AMP.SW
AUDIO MUTE
X2 PLAY
PFG
25Hz or 30Hz
PG/FG COMPOSITE SIG
5Vp-p
PLAY ON
C/R/S/F
(CUE REVIEW STOP SLOW)
TRICK
(CUE REVIEW SLOW STILL)
C6510
QR6502
QR6501
C6542
C6546
C6507
R6527
REVERSE
STOP
FORWARD
CURR LIMIT
FG1/FG2
IC6502-1
IC6502-7
IC6503-15
Q6511 Q6512
IC6502
IC6501
SCHMIT
AMP
MIX
FG AMP
FREQUENCY DOUBLER
Q6501
Q6502
BUFFER
FG2
FG1
QR6510
CASSETTE LED
POWER OFF
TO POWER/SHORT PROTECT
ART V-SYNC
SP/LP/SLP
TO VIDEO
50Hz
A.NTSC
S-CLOCK
S-DATA
TO DRIVE
ENV SELECT
ROTARY
H.AMP.SW
H.SW
A.MUTE
TO VIDEO/Hi-Fi AUDIO
JP6502 PJ6002
JP6501 PJ6001
JP6503 PJ6003
JP6504 PJ6004
P6001 P6802
P6002 P7501
P6003 P9302
P6507 P001
(THIS CIRCUIT DISSOLVES THE CAPSTAN POWER VOLTAGE WHEN STOPPING CAPSTAN MOTOR)
UNREG 14V
F1001
Q1001,D1001
CAPSTAN POWER CONTROL
QR1002
D1002
QR1003
D1003
QR6507
SOLENOID (FROM IC6503-53)
(THIS CIRCUIT ACTIVATES THE CAPSTAN MOTOR VOLTAGE TO STEP THE ROTATION OF CAPSTAN MOTOR DOWN WHEN MOVING SOLENOIDE DURING PLAYBACK MODE SUCH AS CUE OR REVIEW MODE.)
SLOW FREE RUN
REG.5V
VR2013
MOTOR CURRENT IS FED BACK TO THE TORQUE CONTROL
ERROR VOLTAGE
R2002
R2001
CURRENT IN SLOW MODE
560mV
(SLOW MODE)
CAP REVERSE(H)
CAP STOP(M)
CAP FORWARD(L)
TORQUE CONTROL
DIFFERENTIAL AMPLIFIER
MOTOR DRIVE
POSITION SIGNAL PROCESS
TORQUE DIRECTION
IC2001 (CAP DRIVE)
IC2001-①③㉓
2.2Vp-p
P2001
HALL IC
H1- H1+ H2- H2+ H3- H3+
FG2 (90°PHASE DIFFERENCE)
FG1
DD CAPSTAN MOTOR
IC2901
TORQUE CONTROL
DIFFERENTIAL AMP
POSITION DET
PG/FG
SCHMIT
IC2901-1
IC2901-2
IC2901-17
IC2901-8
0.35Vp-p
IC2901-9
0.8msec
MOTOR 5V
5V
M1 M2 M3
HE- HE+
HCM HEM
CYLINDER DRIVE C.B.A.
DD CYLINDER MOTOR
HALL IC
DP7501 VSL0117
VTR AV REC SP LP X2 OTR VPS
COUNT M ON R S OFF ED
IC7501
X7501
X-TAL OUT
X-TAL IN
SEG 64 SEG 56
GRID 1G GRID 13G
SEGMENT BUS
GRID BUS
IC7503
RESET
REG.5V
P57
SCAN OUT (P40)
SW1551 POWER SW
P7504 P6803 P6806 P6401
KEY SCAN IN
P20 P21 P22 P23 P54
KEY SCAN OUT
P40 P41 P43 P47
SERIAL CLOCK
SERIAL DATA IN
SERIAL DATA OUT
P7503 P1572 P1571
CONNECTION C.B.A.
(KEY OPERATION PANEL)
STOP
REC
AUDIO OUT
TRACKING (+)
EJECT
TRACKING (-)
REW
PLAY
MEMORY
FF
RESET
PAUSE/STILL
(THIS SYSTEM CONTROL MICROPROCESSOR(IC6503) OWNS SYSTEM CONTROL AND SERVO CONTROL SECTIONS)

Hi-Fi AUDIO BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE


IC4201
AMP
7
6
1
2
5
3
DISPLAY C.B.A.
DP7502
1G
Hi-Fi/NORMAL MIX
L
dB -∞ 40 30 20 10 7 4 2 0 2 4 7 10+
S1 B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12
R
2G
QR7511
QR7510
QR7518
QR7517
SEGMENTS LINE
14
13
28 ~ 26
19 ~ 17
15
GE1 GE2
GRIDS
D1 D2
D9 D10
D12
SEGMENTS
AUDIO INDICATION SIG IN
(R) (L)
FIX1 FIX2
10
11
4
2
IC7505
VR4004
METER ADJ
P4003 P7502
5 5
6 6
METER(L)
METER(R)
P7502 P4003
2 2
1 1
3 3
4 4
R-CH Ⓛ
L-CH Ⓛ
PACK
24
23
INPUT/OUTPUT SELECT PACK C.B.A.
INPUT SEL (A)
INPUT SEL (B)
IC4901
2 23
A B
INPUT SELECT DECODER
16
20
9
5
13
12
S0
S1
AUDIO LINE IN(2)
AUDIO IN
AUDIO LINE IN(1)
(L)
(R)
P4801 P3502
1 1
3 3
AUDIO IN L CH
AUDIO IN R CH
I/O PACK
34
32
IC3901
MIX
LOGIC CTL
6 AUDIO(L)
7 AUDIO(R)
17
15
10
INPUT SEL(A)
I/O PACK
12
INPUT SEL(B)
I/O PACK
13
AUDIO IN(N)
I/O PACK
36
NORMAL AUDIO CIRCUIT
AUDIO SECTION IN MAIN C.B.A.
TP4001
REC/PLAY 150mVp-p
REC/PLAY 20mVp-p
TP4001 110mVp-p REC
TP4001 130mVp-p PLAY
PACK
31
33
7
9
EE Ⓗ
NORMAL AUDIO
IC4501
1
4
AGC DET
EVR
REC
P.B
EE/VV CTL
59
56
58
57
C4553～C4555 R4551～R4553
20KHz L.P.F
7
8
6
9
C4503～C4505 R4502～R4504
CCA
WEIGHTING
DET
ATT
R
P
61
62
50
15
CCA INPUT LEVEL(dB)
-80 -60 -40 -20 0
-20
-40
-60
-80
STANDARD LEVEL(0d
RECORDING (COMPRESSION)
PLAYBACK (EXPANSION)
CCA OUTPUT LEVEL(dB)
IC4501 (OUTPUT SELECTOR)
66
OUTPUT MATRIX
64 L CH AUDIO
63 R CH AUDIO
LINE AMP
MUT
69
67
68
DECODER
72
74
75
65
Q4502
Q4503
AUDIO OUT(L)
AUDIO OUT(R)
PACK
35
36
I/O PACK
28
30
AUDIO OUT(2)
AUDIO OUT(1)
REC/PLAY 320mVp-p
MODE SELECT Ⓛ
PACK
6
AUDIO MUT Ⓗ
PACK
8
FROM SYSTEM CONTROL

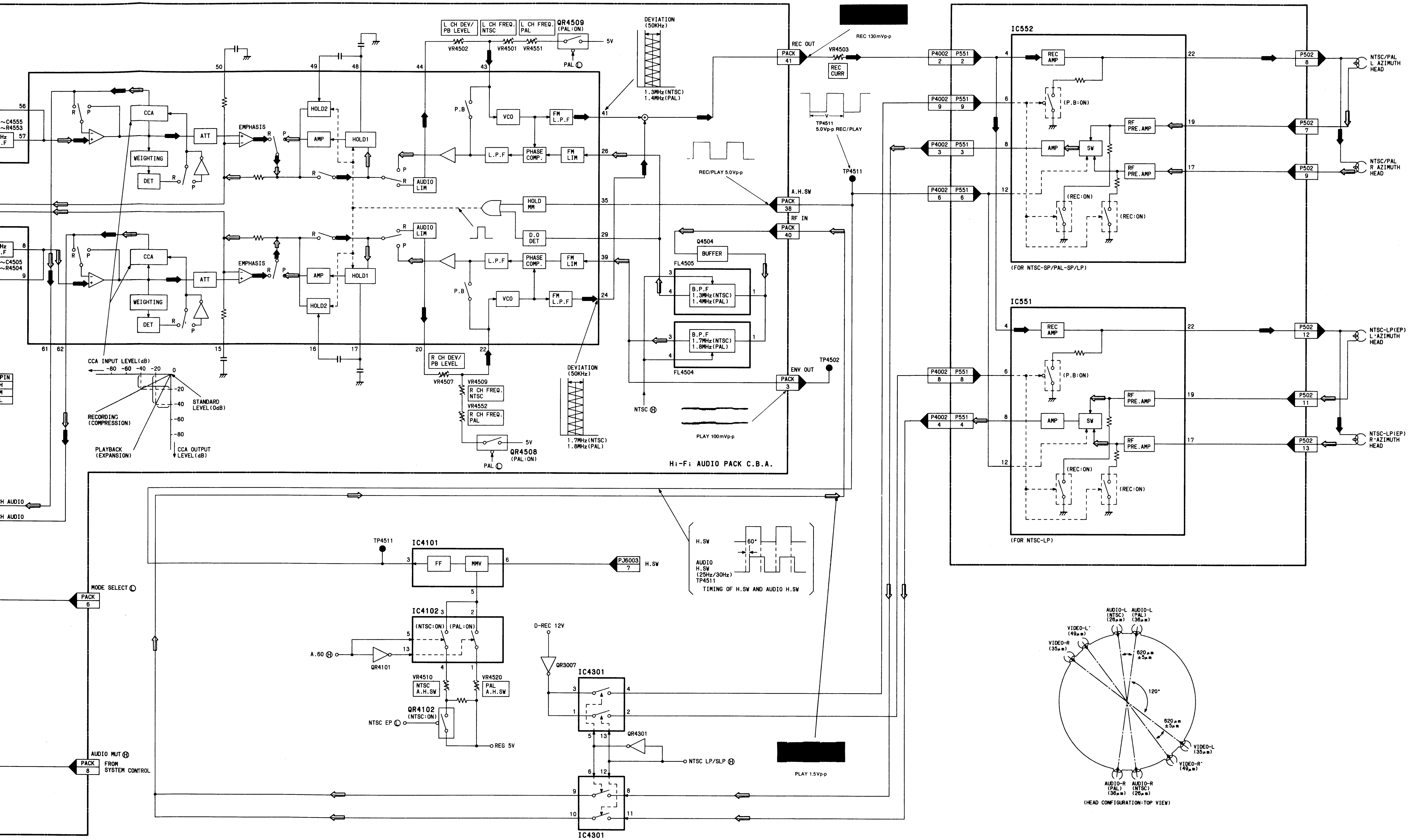
INPUT		TURNED SWITCH
INPUT SEL (A) ②	INPUT SEL (B) ㉓	
H	L	S0
L	H	S1

INPUT SEL (A) ⑰	INPUT SEL (B) ⑮	AUDIO OUT ⑩
H	L	AUDIO(L) & AUDIO(R)
L	H	

MODE	28PIN
REC(HSL:ON)	H
REC(HSL:OFF)	M
PB	L

MODE	IC4501-72	AUDIO OUT			MODE DISPLAY	
		LINE:L	LINE:R	MIX	L	R
STEREO	SWITCH AT EVERY FALLING EDGE ST-L-R-N	Hi-Fi:L	Hi-Fi:R	Hi-Fi:L+R	ON	ON
LEFT		Hi-Fi:L	Hi-Fi:L	Hi-Fi:L	ON	OFF
RIGHT		Hi-Fi:R	Hi-Fi:R	Hi-Fi:R	OFF	ON
NORMAL		NORMAL	NORMAL	NORMAL	OFF	OFF

ACK MODE

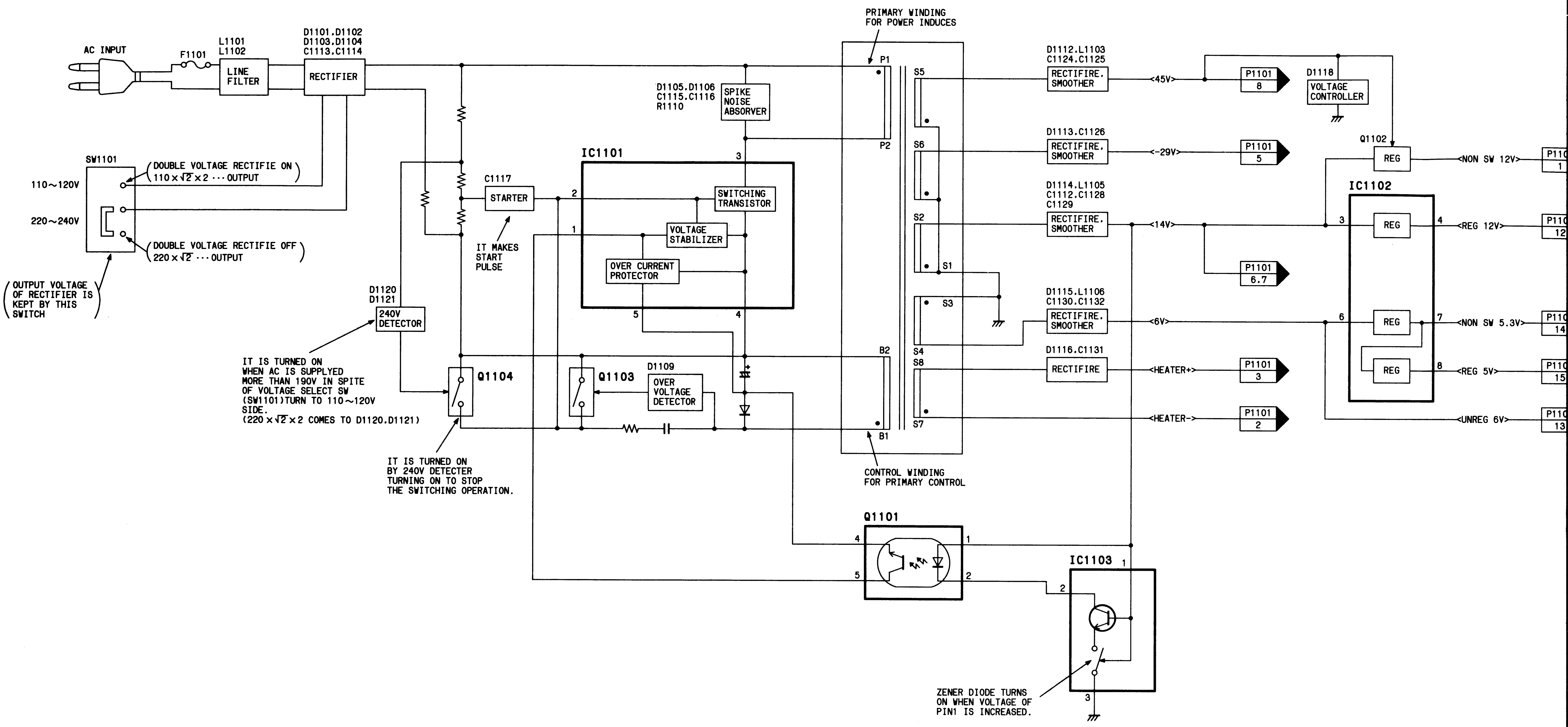

56
~C4555
~R4553
Hz
.F
57
8
~C4505
~R4504
9
R
P
CCA
WEIGHTING
DET
ATT
EMPHASIS
50
49
48
44
43
HOLD2
AMP
HOLD1
AUDIO LIM
P.B
VCO
FM L.P.F
L.P.F
PHASE COMP.
FM LIM
HOLD MM
D.O DET
41
26
35
29
39
24
61
62
15
16
17
20
22
L CH DEV/ PB LEVEL
L CH FREQ. NTSC
L CH FREQ. PAL
QR4509 (PAL:ON)
VR4502
VR4501
VR4551
5V
PAL Ⓛ
DEVIATION (50KHz)
1.3MHz(NTSC)
1.4MHz(PAL)
R CH DEV/ PB LEVEL
VR4507
VR4509
R CH FREQ. NTSC
VR4552
R CH FREQ. PAL
QR4508 (PAL:ON)
1.7MHz(NTSC)
1.8MHz(PAL)
CCA INPUT LEVEL(dB)
-80 -60 -40 -20 0
-20
-40
-60
-80
STANDARD LEVEL(0dB)
RECORDING (COMPRESSION)
PLAYBACK (EXPANSION)
CCA OUTPUT LEVEL(dB)
PIN
H
M
L
H AUDIO
H AUDIO
REC OUT
PACK 41
VR4503
REC CURR
REC 130mVp-p
TP4511 5.0Vp-p REC/PLAY
TP4511
REC/PLAY 5.0Vp-p
A.H.SW
PACK 38
RF IN
PACK 40
Q4504
BUFFER
FL4505
B.P.F 1.3MHz(NTSC) 1.4MHz(PAL)
FL4504
B.P.F 1.7MHz(NTSC) 1.8MHz(PAL)
3
4
1
NTSC Ⓗ
ENV OUT
PACK 3
TP4502
PLAY 100mVp-p
Hi-Fi AUDIO PACK C.B.A.
P4002 2 P551 2
P4002 9 P551 9
P4002 3 P551 3
P4002 6 P551 6
P4002 8 P551 8
P4002 4 P551 4
IC552
REC AMP
(P.B:ON)
AMP
SW
RF PRE.AMP
(REC:ON)
4
6
8
12
22
19
17
(FOR NTSC-SP/PAL-SP/LP)
IC551
(FOR NTSC-LP)
P502 8
P502 7
P502 9
P502 12
P502 11
P502 13
NTSC/PAL L AZIMUTH HEAD
NTSC/PAL R AZIMUTH HEAD
NTSC-LP(EP) L'AZIMUTH HEAD
NTSC-LP(EP) R'AZIMUTH HEAD
H.SW
60°
AUDIO H.SW (25Hz/30Hz) TP4511
TIMING OF H.SW AND AUDIO H.SW
TP4511
IC4101
FF
MMV
3
6
5
PJ6003 7
H.SW
IC4102
(NTSC:ON)
(PAL:ON)
2
13
4
1
A.60 Ⓗ
QR4101
VR4510 NTSC A.H.SW
VR4520 PAL A.H.SW
QR4102 (NTSC:ON)
NTSC EP Ⓛ
REG 5V
MODE SELECT Ⓛ
PACK 6
AUDIO MUT Ⓗ
PACK 8
FROM SYSTEM CONTROL
D-REC 12V
QR3007
IC4301
QR4301
NTSC LP/SLP Ⓗ
PLAY 1.5Vp-p
9
10
11
12
VIDEO-L' (49μm)
VIDEO-R (35μm)
AUDIO-L (NTSC) (26μm)
AUDIO-L (PAL) (36μm)
620μm ±5μm
120°
620μm ±5μm
VIDEO-L (35μm)
VIDEO-R' (49μm)
AUDIO-R (PAL) (36μm)
AUDIO-R (NTSC) (26μm)

[redacted]

[redacted]

(HEAD CONFIGURATION:TOP VIEW)

POWER SUPPLY & SHORT PROTECT BLOCK DIAGRAM


AC INPUT
F1101
L1101
L1102
LINE FILTER
D1101.D1102
D1103.D1104
C1113.C1114
RECTIFIER
SW1101
110～120V
220～240V
DOUBLE VOLTAGE RECTIFIE ON
110×√2×2 ··· OUTPUT
DOUBLE VOLTAGE RECTIFIE OFF
220×√2 ··· OUTPUT
D1120
D1121
240V DETECTOR
Q1104
C1117
STARTER
IC1101
SWITCHING TRANSISTOR
VOLTAGE STABILIZER
OVER CURRENT PROTECTOR
1
2
3
4
5
D1105.D1106
C1115.C1116
R1110
SPIKE NOISE ABSORVER
Q1103
D1109
OVER VOLTAGE DETECTOR
PRIMARY WINDING FOR POWER INDUCES
P1
P2
B2
B1
CONTROL WINDING FOR PRIMARY CONTROL
S5
S6
S2
S1
S3
S4
S8
S7
D1112.L1103
C1124.C1125
RECTIFIRE, SMOOTHER
<45V>
D1113.C1126
RECTIFIRE, SMOOTHER
<-29V>
D1114.L1105
C1112.C1128
C1129
RECTIFIRE, SMOOTHER
<14V>
D1115.L1106
C1130.C1132
RECTIFIRE, SMOOTHER
<6V>
D1116.C1131
RECTIFIRE
<HEATER+>
<HEATER->
P1101
8
P1101
5
P1101
6.7
P1101
3
P1101
2
D1118
VOLTAGE CONTROLLER
Q1102
REG
<NON SW 12V>
IC1102
REG
REG
REG
3
4
6
7
8
<REG 12V>
<NON SW 5.3V>
<REG 5V>
<UNREG 6V>
P11
1
P11
12
P11
14
P11
15
P11
13
Q1101
1
2
4
5
IC1103
1
2
3

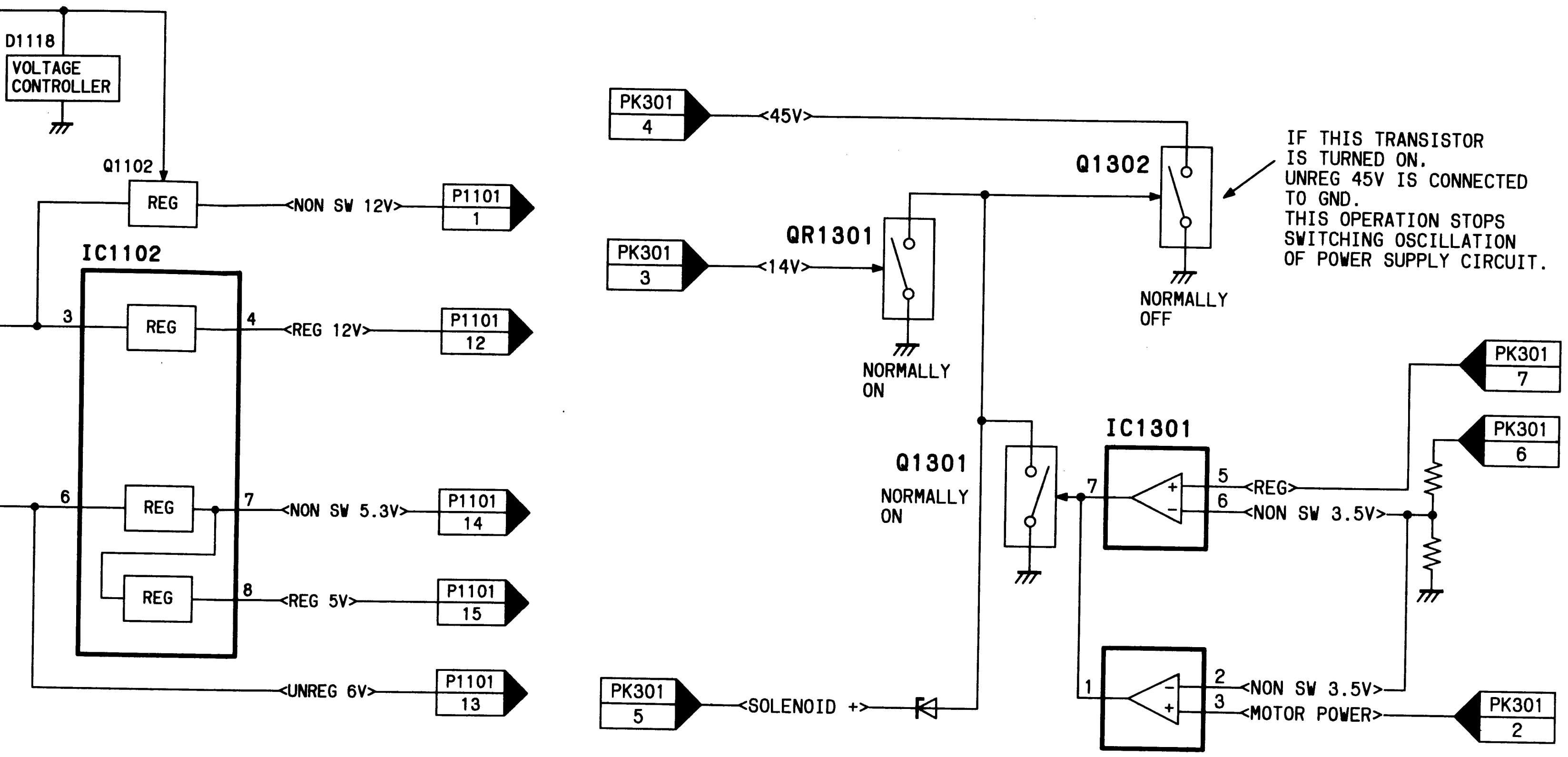
(OUTPUT VOLTAGE OF RECTIFIER IS KEPT BY THIS SWITCH)

IT MAKES START PULSE

IT IS TURNED ON WHEN AC IS SUPPLYED MORE THAN 190V IN SPITE OF VOLTAGE SELECT SW (SW1101)TURN TO 110～120V SIDE. (220×√2×2 COMES TO D1120.D1121)

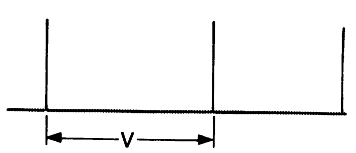
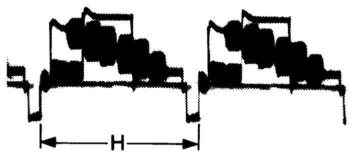
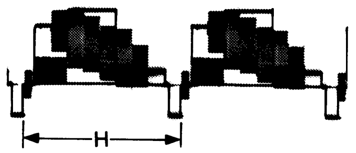
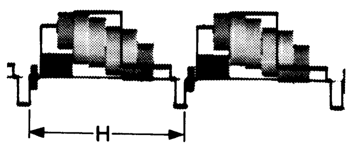
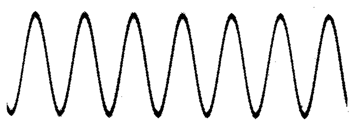
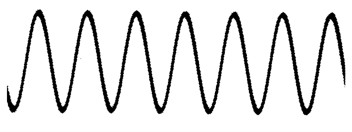
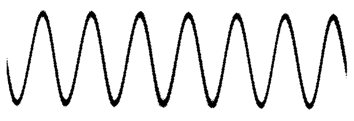
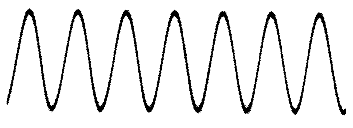
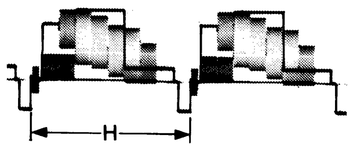
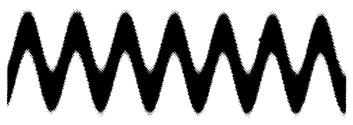
IT IS TURNED ON BY 240V DETECTER TURNING ON TO STOP THE SWITCHING OPERATION.

ZENER DIODE TURNS ON WHEN VOLTAGE OF PIN1 IS INCREASED.


D1118
VOLTAGE CONTROLLER
Q1102
REG
<NON SW 12V>
P1101 1
IC1102
3
REG
4
<REG 12V>
P1101 12
6
REG
7
<NON SW 5.3V>
P1101 14
REG
8
<REG 5V>
P1101 15
<UNREG 6V>
P1101 13
PK301 4
<45V>
PK301 3
<14V>
QR1301
NORMALLY ON
Q1302
NORMALLY OFF
PK301 5
<SOLENOID +>
Q1301
NORMALLY ON
IC1301
7
5
<REG>
6
<NON SW 3.5V>
PK301 7
PK301 6
1
2
<NON SW 3.5V>
3
<MOTOR POWER>
PK301 2

IF THIS TRANSISTOR
IS TURNED ON.
UNREG 45V IS CONNECTED
TO GND.
THIS OPERATION STOPS
SWITCHING OSCILLATION
OF POWER SUPPLY CIRCUIT.

WAVEFORM OF INPUT/OUTPUT SELECT PACK PINS

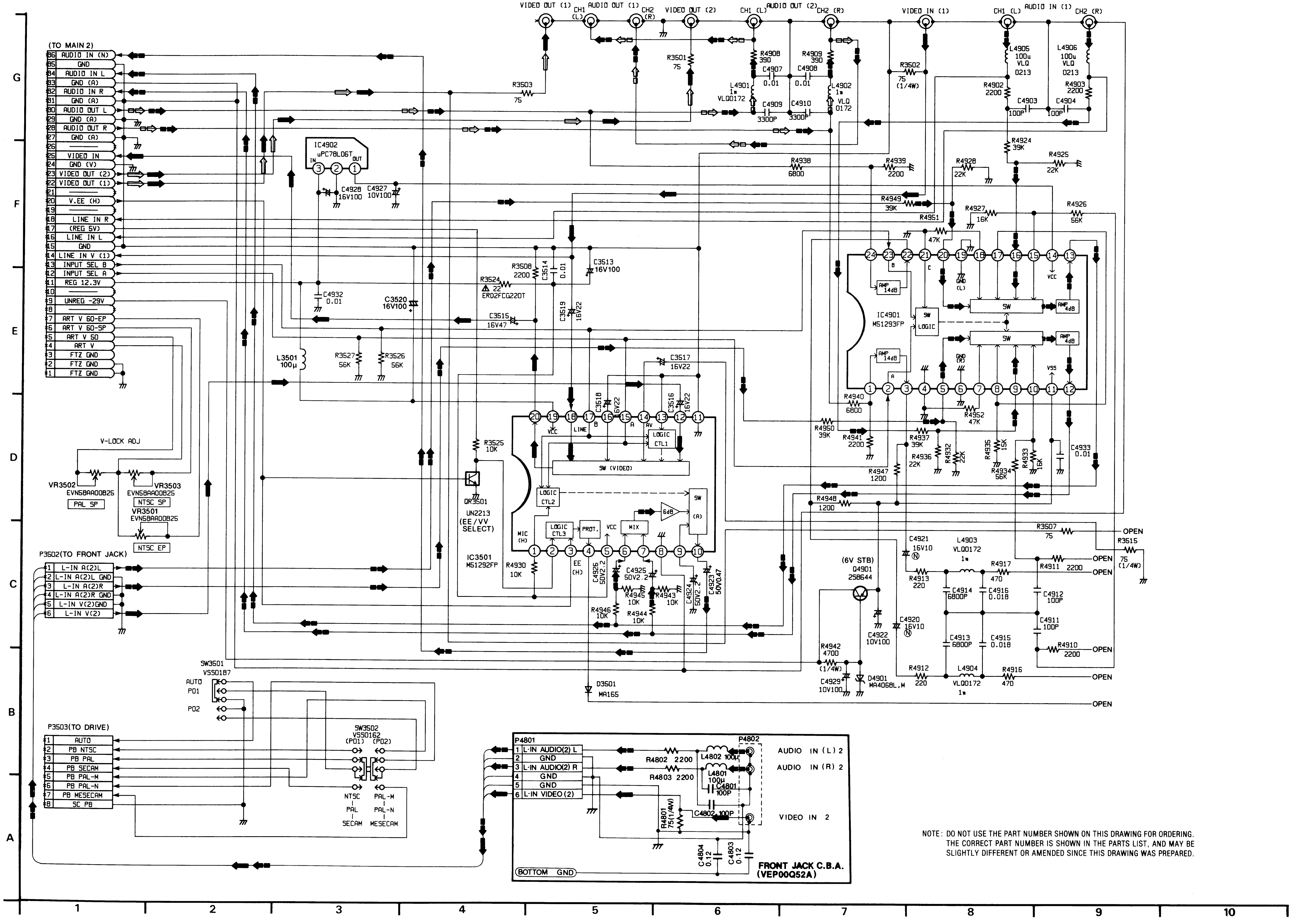
PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
4 • 5	 PAUSE 2.5Vp-p	22 • 23	 PLAY 2.2Vp-p
14	 REC/PLAY 0.54Vp-p	25	 REC/PLAY 0.5Vp-p
16	 REC/PLAY 0.26Vp-p	28 • 30	 REC/PLAY 0.34Vp-p
18	 REC/PLAY 0.26Vp-p	32 • 34	 REC/PLAY 150mVp-p
22 • 23	 REC 2.0Vp-p	36	 REC/PLAY 20mVp-p

INPUT/OUTPUT SELECT PACK C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q4901		
				PIN NO.	E	C	B
NTSC		PAL	REC		−6.1	−28.5	−6.7
	PAL	NTSC	PLAY		−6.1	−28.3	−6.7
PAL		SECAM	REC		−6.1	−28.4	−6.7
	SECAM	PAL	PLAY		−6.1	−28.4	−6.7
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR3501		
				PIN NO.	E	C	B
NTSC		PAL	REC		0	0.1	4.8
	PAL	NTSC	PLAY		0	4.8	0.9
PAL		SECAM	REC		0	0.1	4.8
	SECAM	PAL	PLAY		0	4.9	0.9

INPUT/OUTPUT SELECT PACK SCHEMATIC DIAGRAM

- ⬅ VIDEO MAIN SIGNAL PATH IN REC MODE
- ⇦ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
- ◀■ AUDIO MAIN SIGNAL PATH IN REC MODE
- ◁□ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



(TO MAIN 2)
AUDIO IN (N)
GND
AUDIO IN L
GND (A)
AUDIO IN R
AUDIO OUT L
AUDIO OUT R
VIDEO IN
GND (V)
VIDEO OUT (2)
VIDEO OUT (1)
V.EE (H)
LINE IN R
(REG 5V)
LINE IN L
LINE IN V (1)
INPUT SEL B
INPUT SEL A
REG 12.3V
UNREG -29V
ART V 60-EP
ART V 60-SP
ART V 50
ART V
FTZ GND
VIDEO OUT (1)
AUDIO OUT (1)
CH1 (L)
CH2 (R)
VIDEO OUT (2)
AUDIO OUT (2)
VIDEO IN (1)
AUDIO IN (1)
IC4902
uPC78L06T
IC4901
M51293FP
IC3501
M51292FP
QR3501
UN2213
(EE/VV SELECT)
Q4901
2SB644
(6V STB)
D3501
MA165
D4901
MA4068L,M
SW (VIDEO)
LOGIC CTL1
LOGIC CTL2
LOGIC CTL3
PROT.
MIX
6dB
AMP 14dB
AMP 4dB
SW
LOGIC
V-LOCK ADJ
VR3502
VR3503
VR3501
EVN5BAA00B25
PAL SP
NTSC SP
NTSC EP
L3501 100μ
P3502(TO FRONT JACK)
L-IN A(2)L
L-IN A(2)L GND
L-IN A(2)R
L-IN A(2)R GND
L-IN V(2)GND
L-IN V(2)
SW3501
VSS0187
AUTO
PO1
PO2
P3503(TO DRIVE)
AUTO
PB NTSC
PB PAL
PB SECAM
PB PAL-M
PB PAL-N
PB MESECAM
SC PB
SW3502
VSS0162
NTSC
PAL
SECAM
PAL-M
PAL-N
MESECAM
P4801
L-IN AUDIO(2) L
GND
L-IN AUDIO(2) R
L-IN VIDEO (2)
P4802
AUDIO IN (L) 2
AUDIO IN (R) 2
VIDEO IN 2
(BOTTOM GND)
FRONT JACK C.B.A.
(VEP00Q52A)
OPEN
L4901 1m VLQ0172
L4902 1m VLQ0172
L4903 VLQ0172 1m
L4904 VLQ0172 1m
L4905 100u VLQ 0213
L4906 100u VLQ 0213
R3501 75
R3502 75 (1/4W)
R3503 75
R3507 75
R3515 75 (1/4W)
1 2 3 4 5 6 7 8 9 10
G F E D C B A

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

INPUT/OUTPUT SELECT PACK C.B.A.	
Transistor	
Q4901	A-5
Transistor & Resistor	
QR3501	A-3
Integrated Circuit	
IC3501 IC4901 IC4902	B-3 B-2 C-3
Adjustment	
VR3501 VR3502 VR3503	B-6 B-7 B-6
Connector	
P3502 P3503 P4801	A-1 B-6 D-1

ADDRESS INFORMATION

REC MODE
PLAYBACK MODE

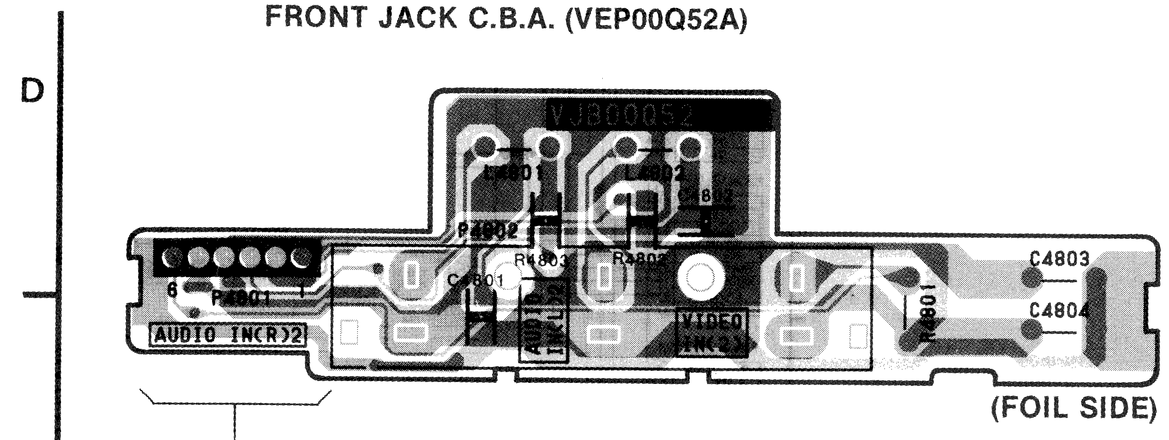
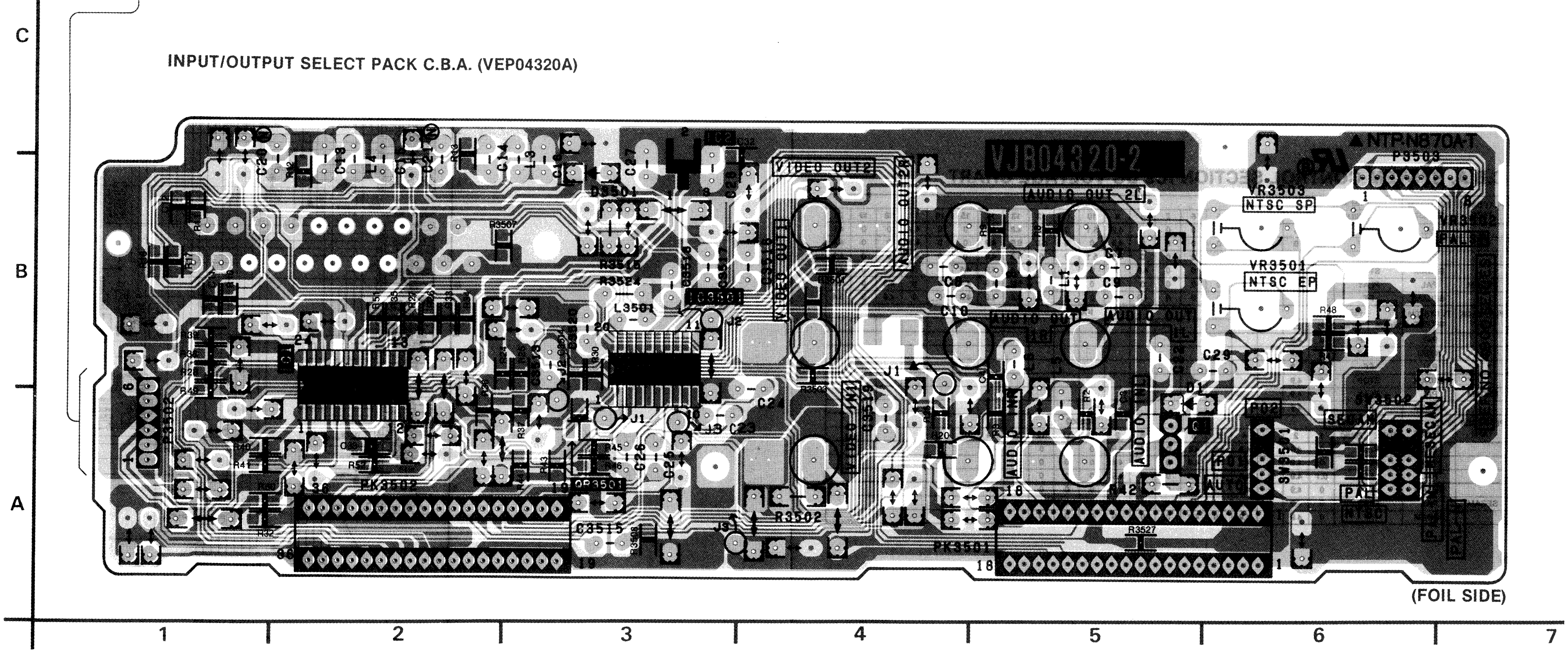
INPUT/OUTPUT SELECT PACK C.B.A.	
Transistor	
Q4901	A-5
Transistor & Resistor	
QR3501	A-3
Integrated Circuit	
IC3501 IC4901 IC4902	B-3 B-2 C-3
Adjustment	
VR3501 VR3502 VR3503	B-6 B-7 B-6
Connector	
P3502 P3503 P4801	A-1 B-6 D-1

ADDRESS INFORMATION

INPUT/OUTPUT SELECT PACK C.B.A. (VEP04320A)

FRONT JACK C.B.A. (VEP00Q52A)

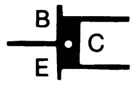
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04320A)



D
C
B
A
1
2
3
4
5
6
7
C4803
C4804
AUDIO IN(R)2
VIDEO IN(2)
P4801
(FOIL SIDE)
VJB04320-2
NTP-N870A-T
P3503
VR3503
NTSC SP
VR3501
NTSC EP
VR3502
VIDEO OUT2
AUDIO OUT 2L
AUDIO OUT 1L
IC3501
L3501
QR3501
C3515
R3502
R3527
PK3502
PK3501
P3502
J1
J2
(FOIL SIDE)

INPUT/OUTPUT SELECT PACK C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC3501																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		12.1	0.1	4.8	0	12.1	7.5	7.5	0	7.6	5.5	0	7.2	0	7.2	0	7.2	4.5	7.2	12.2	6.4
	PAL	NTSC	PLAY		12.1	4.9	0.9	11.4	12.1	7.5	7.5	0	0	5.5	0	7.2	0	7.2	0	7.2	4.5	7.2	12.2	6.4
PAL		SECAM	REC		12.1	0	4.8	0	12.1	0	0.7	0	0.7	5.5	0	7.2	0	7.2	0	7.2	4.5	7.2	12.2	6.4
	SECAM	PAL	PLAY		12.1	4.9	0.9	11.4	12.1	7.5	7.5	0	0	5.5	0	7.2	0	7.2	0	7.2	4.5	7.2	12.2	6.4
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC4901																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0	0	0.1	0	0	0	0	0	0	0	−6.1	0.1	0.1	6.1	0	0	0	0	0	0
	PAL	NTSC	PLAY		0	0	0.1	0	0	0	0	0	0	0	−6.1	0.1	0.1	6.1	0	0	0	0	0	0
PAL		SECAM	REC		0	0	0.1	0	0	0	0	0	0	0	−6.1	0.1	0.1	6.1	0	0	0	0	0	0
	SECAM	PAL	PLAY		0	0	0	0	0	0	0	0	0	0	−6.1	0.1	0.1	6.1	0	0	0	0	0	0
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC4901										IC4902									
				PIN NO.	21	22	23	24							1	2	3							
NTSC		PAL	REC		0	−0.1	4.5	0							6.1	0	12.2							
	PAL	NTSC	PLAY		0	−0.1	4.5	0							6.1	0	12.2							
PAL		SECAM	REC		0	−0.1	4.5	0							6.1	0	12.2							
	SECAM	PAL	PLAY		0	−0.1	4.5	0							6.1	0	12.2							

TRANSISTOR INFORMATION



MAIN C.B.A. SYSTEM CONTROL SECTION TRANSISTORs VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR6001			QR6002			QR6003			QR6004			QR6005			QR6006		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	STOP		0	5.0	0	4.9	4.9	0	4.9	4.9	0	0	0	2.3	0	0	2.4	0	4.5	0
	PAL	NTSC	PLAY		0	4.9	0	4.9	4.9	0	4.9	0.1	4.9	0	0	2.3	0	4.9	0	0	4.5	0
NTSC		PAL	FF		0	4.7	0	4.9	4.9	0	4.9	4.9	0	0	0	2.3	0	0	4.5	0	4.5	0
PAL		SECAM	STOP		0	5.0	0	4.9	0	4.9	4.9	0.1	4.9	0	4.9	0	0	4.9	0	0	4.5	0
	SECAM	PAL	PLAY		0	4.9	0	4.9	0	4.9	4.9	0.1	4.9	0	4.8	0	0	4.9	0	0	4.5	0
PAL		SECAM	FF		0	4.7	0	4.9	0	4.9	4.9	0.1	4.9	0	4.9	0	0	0	0	0	4.5	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR6007			QR6008			QR6009			QR6010			QR6011			QR6012		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	STOP		0	0	0	0	4.9	0	5.0	0.8	4.9	5.0	0.8	4.9	0	4.9	0	0	0	0
	PAL	NTSC	PLAY		0	0	0	0	4.9	0	5.0	0.9	4.9	5.0	0.8	4.9	0	4.9	0	0	0	0
NTSC		PAL	FF		0	0	0	0	4.9	0	5.0	0.8	4.9	5.0	0.8	4.9	0	4.9	0	0	0	0
PAL		SECAM	STOP		0	4.4	0	0	4.9	0	5.0	0.8	4.9	5.0	0.8	4.9	0	4.9	0	0	0	0
	SECAM	PAL	PLAY		0	4.2	0	0	4.9	0	5.0	0.8	4.9	5.0	0.8	4.9	0	4.9	0	0	0	0
PAL		SECAM	FF		0	4.4	0	0	4.9	0	5.0	0.8	4.9	5.0	0.7	4.9	0	4.9	0	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR6013			QR6014			QR6015			QR6016			QR6017			QR6018		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	STOP		4.9	4.9	0	4.9	0.5	4.9	0	4.9	0	4.9	0	4.9	0	0	0.1	0	0	0
	PAL	NTSC	PLAY		4.9	4.9	0	4.9	3.6	4.9	0	4.9	0	0.1	0	0.2	0	0	0	0	0	0
NTSC		PAL	FF		4.9	4.9	0	4.9	0.5	4.9	0	4.9	0	4.9	0	4.9	0	0	0	0	0	0
PAL		SECAM	STOP		4.9	4.9	0	4.9	0.5	4.9	0	1.9	0	4.9	0	4.9	0	0	0	0	0	0
	SECAM	PAL	PLAY		4.9	4.9	0	4.9	3.6	4.9	0	4.9	0	0.1	0	0.2	0	0	0	0	0	0
PAL		SECAM	FF		4.9	4.9	0	4.9	0.5	4.9	0	4.9	0	4.9	0	4.9	0	0	0	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR6019			QR6020			QR6021		
				PIN NO.	E	C	B	E	C	B	E	C	B
NTSC		PAL	STOP		0	0.1	0	0	0	0	0	0	0
	PAL	NTSC	PLAY		0	0	5.0	0	0	0	0	0	0
NTSC		PAL	FF		0	0.1	0	0	0	0	0	0	0
PAL		SECAM	STOP		0	0.1	0	0	0	0	0	4.4	0
	SECAM	PAL	PLAY		0	0	0	0	0	0	0	4.1	0
PAL		SECAM	FF		0	0.1	0	0	0	0	0	4.4	0

MAIN C.B.A. SYSTEM CONTROL SECTION ICs DC VOLTAGE CHART

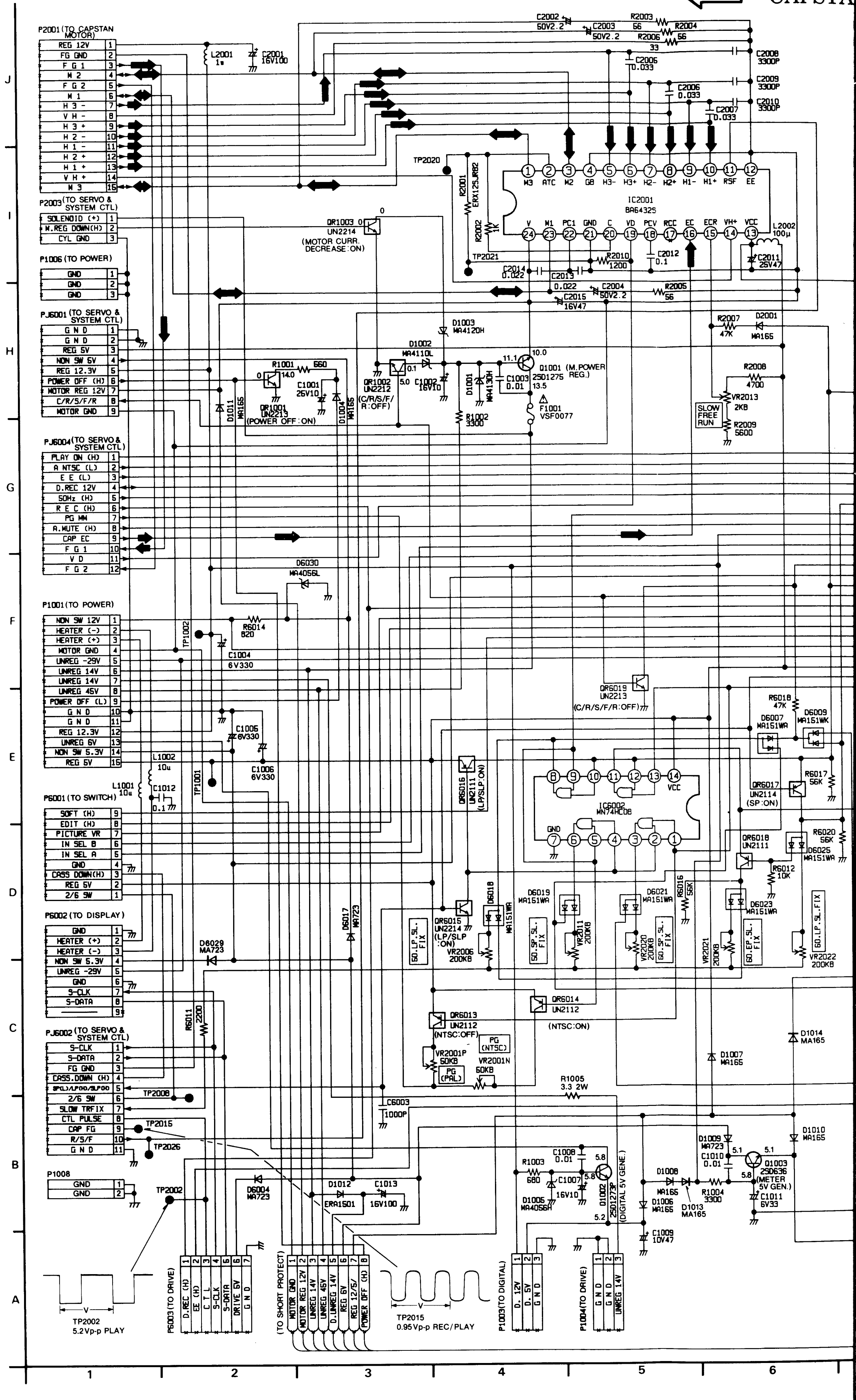
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6001																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	STOP		4.5	0	0	0	0	0	0	0	4.9	5.1	0	0	4.8	4.9	0	0	4.9	0	0	4.9
	PAL	NTSC	PLAY		4.5	0	0	0	0	0	0	0	4.9	0	0	5.0	0.9	4.9	0	0	4.9	0	0	4.9
NTSC		PAL	FF		4.5	0	0	0	0	0	0	0	4.9	5.1	0	0	4.8	4.9	0	0	4.9	0	0	4.9
PAL		SECAM	STOP		4.5	0	0	0	0	0	0	4.9	0	0	0	0	4.8	4.9	4.5	0	0	4.9	0	4.9
	SECAM	PAL	PLAY		4.5	0	0	0	0	0	0	0	0	0	0	5.1	0.9	4.9	4.1	0	0	4.9	0	4.9
PAL		SECAM	FF		4.4	0	0	0	0	0	0	4.9	0	0	0	0	4.8	4.9	4.5	0	0	4.9	0	3.4

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6001	
				PIN NO.	21	22
NTSC		PAL	STOP		0	4.9
	PAL	NTSC	PLAY		0	4.9
NTSC		PAL	FF		0	4.9
PAL		SECAM	STOP		0	4.9
	SECAM	PAL	PLAY		0	4.9
PAL		SECAM	FF		0	4.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6002													
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NTSC		PAL	STOP		0	4.9	0	4.9	4.9	4.9	0	0	4.9	0	0	0	0	4.9
	PAL	NTSC	PLAY		0	4.9	0	4.9	4.9	4.9	0	0	4.9	0	0	0	0	4.9
NTSC		PAL	FF		0.1	4.9	0	4.8	4.9	4.9	0	0	4.9	0	0	0	0	4.9
PAL		SECAM	STOP		0	4.9	0	4.9	4.9	4.9	0	0	4.9	0	0	0	0	4.9
	SECAM	PAL	PLAY		0	4.9	0	4.9	4.9	4.9	0	0	4.9	0	0	0	0	4.9
PAL		SECAM	FF		0	4.9	0	4.9	4.9	4.9	0	0	4.9	0	0	0	0	4.9

MAIN SCHEMATIC DIAGRAM (1/2)

➡ CAPSTA
⇨ CAPSTA


P2001 (TO CAPSTAN MOTOR)
REG 12V
FG GND
F G 1
M 2
F G 2
M 1
H 3 -
V H -
H 3 +
H 2 -
H 1 -
H 2 +
H 1 +
V H +
M 3
P2003 (TO SERVO & SYSTEM CTL)
SOLENOID (+)
M.REG DOWN(H)
CYL GND
P1006 (TO POWER)
PJ6001 (TO SERVO & SYSTEM CTL)
PJ6004 (TO SERVO & SYSTEM CTL)
P1001 (TO POWER)
P6001 (TO SWITCH)
P6002 (TO DISPLAY)
PJ6002 (TO SERVO & SYSTEM CTL)
P1008
P6003 (TO DRIVE)
(TO SHORT PROTECT)
P1003 (TO DIGITAL)
P1004 (TO DRIVE)
IC2001 BA6432S
IC6002 MN74HC08
QR1003 UN2214 (MOTOR CURR. DECREASE:ON)
QR1001 UN2213 (POWER OFF:ON)
QR1002 UN2212 (C/R/S/F/R:OFF)
Q1001 2SD1275 (M.POWER REG.)
F1001 VSF0077
SLOW FREE RUN
QR6019 UN2213 (C/R/S/F/R:OFF)
QR6015 UN2214 (LP/SLP :ON)
QR6013 UN2112 (NTSC:OFF)
QR6014 UN2112 (NTSC:ON)
QR6017 UN2114 (SP:ON)
QR6018 UN2111
Q1002 2SD1273P (DIGITAL 5V GENE.)
Q1003 2SD636 (METER 5V GEN.)
TP2002 5.2Vp-p PLAY
TP2015 0.95Vp-p REC/PLAY
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6

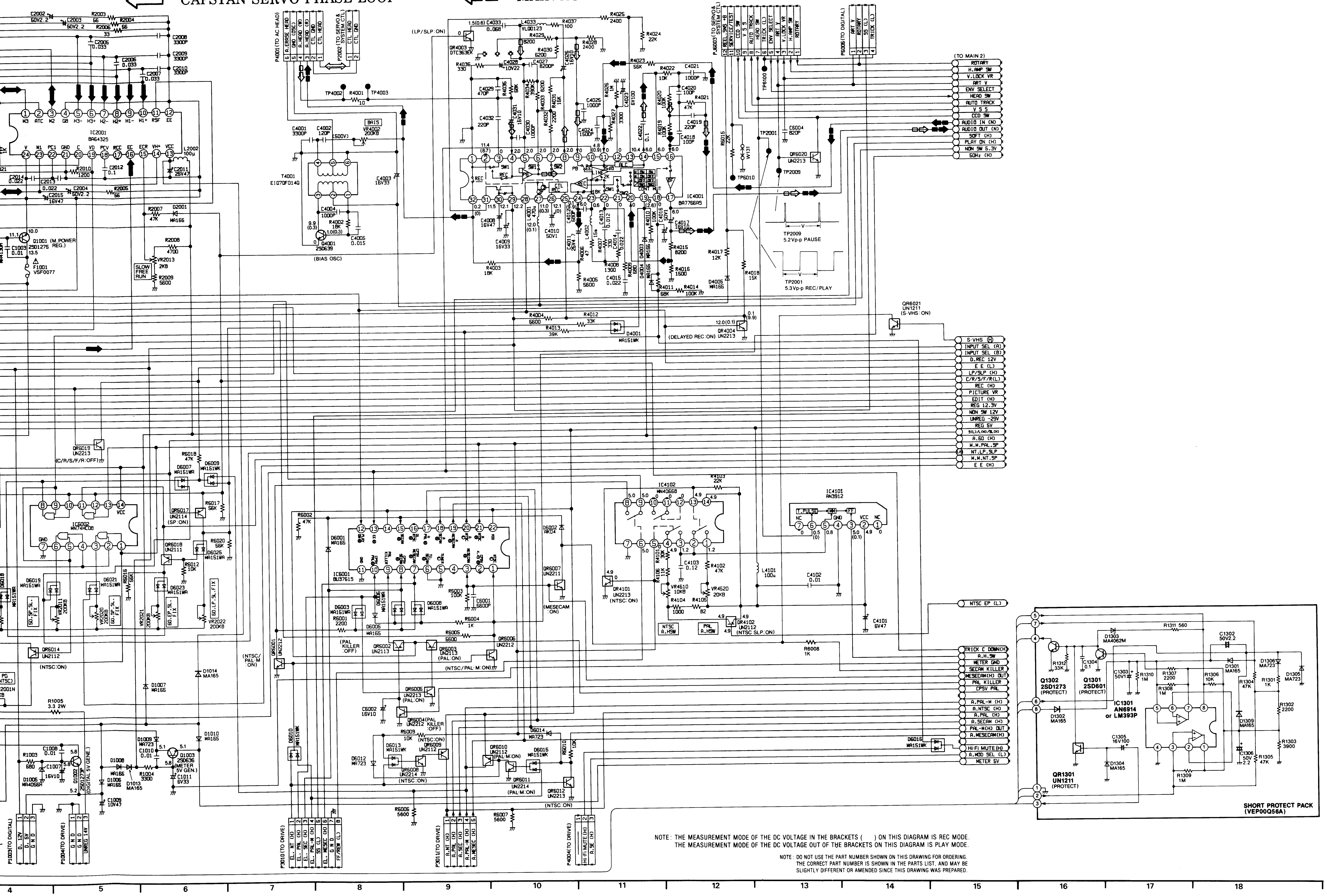
(1/2)

⬅ CAPSTAN SERVO SPEED LOOP

⇦ CAPSTAN SERVO PHASE LOOP

◀■ MAIN AUDIO SIGNAL PATH IN REC MODE

◁□ MAIN AUDIO SIGNAL PATH IN PLAYBACK MODE



IC2001
BA6432S
Q1001 2SD1275 (M.POWER REG.)
F1001 VSF0077
SLOW FREE RUN
VR2013 2KB
P4001 (TO AC HEAD)
A.ERASE HEAD
GND (OSC)
A.HEAD (R)
A.HEAD (B)
CTL HEAD
P2002 (TO SERVO & SYSTEM CTL)
CTL HEAD
T4001 EI070F014Q
Q4001 2SC639
(BIAS OSC)
BIAS VR4002 200KB
(LP/SLP:ON)
QR4003 DTC363EK
IC4001 BA7766AS
REC
SW1
SW2
SW3
CTL REC
ALC
CONT MUT
PJ6003 (TO SERVO & SYSTEM CTL)
REEL 5.3V+B
SERVICE/TEST
CCD SW
V.S.S
AUTO TRACK
HEAD SW
TRICK (L)
ENV SELECT
V.LOCK VR
H.AMP SW
ROTARY
P6005 (TO DIGITAL)
ART V
ROTARY
SS (L)
TRICK
TP2001
TP6010
TP2009
W131
QR6020 UN2213
TP2009 5.2Vp-p PAUSE
TP2001 5.3Vp-p REC/PLAY
(TO MAIN 2)
ROTARY
H.AMP SW
V.LOCK VR
ART V
ENV SELECT
HEAD SW
AUTO TRACK
V S S
CCD SW
AUDIO IN (N)
AUDIO OUT (N)
SOFT (H)
PLAY ON (H)
NON SW 5.3V
50Hz (H)
QR6021 UN1211 (S-VHS:ON)
QR4004 UN2213 (DELAYED REC:ON)
D4001 MA151WK
S-VHS Ⓗ
INPUT SEL (A)
INPUT SEL (B)
D.REC 12V
E E (L)
LP/SLP (H)
C/R/S/F/R(L)
REC (H)
PICTURE VR
EDIT (H)
REG 12.3V
NON SW 12V
UNREG -29V
REG 5V
S(L)/L(M)/SL(H)
A.60 (H)
M.M.PAL.SP
NT.LP.SLP
M.M.NT.SP
E E (H)
QR6019 UN2213 (C/R/S/F/R:OFF)
IC6002 MN74HC08
QR6017 UN2114 (SP:ON)
QR6018 UN2111
QR6014 UN2112 (NTSC:ON)
IC6001 BU3761S
QR6007 UN2211 (MESECAM:ON)
QR6001 UN2212 (NTSC/PAL-M:ON)
QR6002 UN2113 (PAL KILLER:OFF)
QR6003 UN2113 (PAL:ON)
QR6006 UN2212 (NTSC/PAL-M:ON)
QR6005 UN2213 (PAL:ON)
QR6004 UN2212 (PAL KILLER:OFF)
QR6009 UN2112 (NTSC:ON)
QR6008 UN2214 (NTSC:ON)
QR6010 UN2112 (PAL-M:ON)
QR6011 UN2214 (PAL-M:ON)
QR6012 UN2213 (NTSC:ON)
IC4102 MN4066B
IC4101 AN3912
QR4101 UN2213 (NTSC:ON)
QR4102 UN2112 (NTSC SLP:ON)
NTSC A.H.SW
PAL A.H.SW
Q1003 2SD636 (METER 5V GEN.)
Q1002 2SD1273P (DIGITAL 5V GENE.)
P1003 (TO DIGITAL)
D.12V
D.5V
GND
P1004 (TO DRIVE)
GND
GND
UNREG 14V
P3010 (TO DRIVE)
EL.NT (H)
EL.PAL (H)
EL.SEC (H)
EL.PAL-M (H)
SS (L)
EL.MESEC (H)
GND
FF/REW (L)
P3011 (TO DRIVE)
A.NT (H)
A.PAL (H)
A.SEC (H)
A.PAL-M (H)
A.MESEC (H)
P4004 (TO DRIVE)
Hi-Fi MUTE (H)
A.SE (H)
NTSC EP (L)
TRICK C DOWN(H)
A.H.SW
METER GND
SECAM KILLER
MESECAM(H) OUT
PAL KILLER
CPSV PAL
A.PAL-M (H)
A.NTSC (H)
A.PAL (H)
A.SECAM (H)
PAL-M(H) OUT
A.MESECAM(H)
Hi-Fi MUTE (H)
A.MOD SEL (L)
METER 5V
Q1302 2SD1273 (PROTECT)
Q1301 2SD601 (PROTECT)
IC1301 AN6914 or LM393P
QR1301 UN1211 (PROTECT)
SHORT PROTECT PACK (VEP00Q56A)
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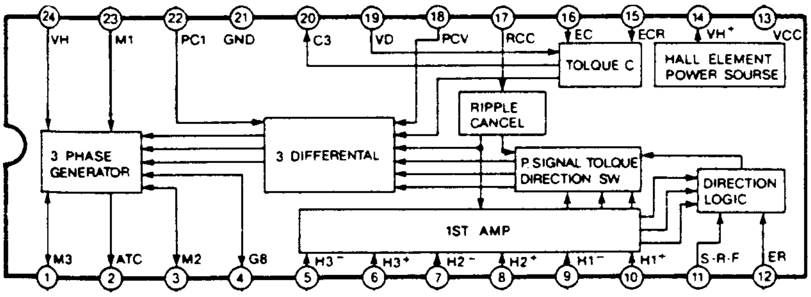
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAY MODE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

IC2001 BA0432S



MAIN C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3001			Q3002			Q3003			Q3004			Q3005			Q3006		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		4.0	0	3.3	3.9	0	3.3	1.8	4.9	2.4	0	0	0.8	0	0	0.8	0.2	5.0	0.1
	PAL	NTSC	PLAY		3.9	0	3.3	3.9	0	3.2	1.8	5.0	2.4	0	0	0.8	0	0	0.8	4.9	5.0	6.0
PAL		SECAM	REC		3.9	0	3.2	3.9	0	3.2	1.8	5.0	2.4	0	0	0	0	0	0	0.2	5.0	0.1
	SECAM	PAL	PLAY		4.0	0	3.3	3.9	0	3.2	1.8	5.0	2.4	0	0	0	0	0	0	4.9	5.0	5.6

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3007			Q3008			Q3009			Q3010			Q3011			Q3015		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.2	0.4	1.0	0.2	0	0.2	0	0	0	0.2	0.2	0.2	0	0.2	1.0	0	1.7
	PAL	NTSC	PLAY		1.9	3.0	2.6	1.9	3.7	2.6	2.6	0	1.9	3.3	4.9	3.7	3.7	0.2	0.3	1.9	1.9	2.6
PAL		SECAM	REC		0	0.2	0.4	1.0	0.2	0.2	0.2	0	0	0	0.2	0.2	0.2	0.1	0.2	1.0	1.0	1.7
	SECAM	PAL	PLAY		1.9	3.0	2.6	1.9	3.7	2.6	2.6	0	1.9	3.2	4.9	3.7	3.7	0.1	0.3	1.9	1.9	2.6

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3016			Q3019			Q3020			Q8001			Q8002			Q8003		
				PIN NO.	E	C	B	E	C	B	E	C	B									
NTSC		PAL	REC		1.0	0	0	5.4	0.4	5.4	0	0.4	0									
	PAL	NTSC	PLAY		1.9	0	0	5.4	5.3	4.7	0	0.4	0									
PAL		SECAM	REC		1.0	0	0	5.4	0.4	5.4	0	0.4	0									
	SECAM	PAL	PLAY		1.9	0	0	5.4	5.3	4.7	0	0.3	0									

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q8001			Q8002			Q8003			Q8004			Q8005			Q8006		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.9	4.9	0.7	1.9	4.9	2.5	1.9	4.9	0	3.1	4.9	2.5	3.1	4.9	3.7	1.3	4.9	7.6
	PAL	NTSC	PLAY		1.9	4.9	0.7	1.9	4.9	2.5	1.9	4.9	0	3.1	4.9	2.5	3.1	4.9	3.7	1.9	5.0	0.7
PAL		SECAM	REC		3.3	4.9	0.6	3.3	4.9	2.7	3.3	4.9	3.9	1.7	4.9	2.4	1.7	4.9	0	3.3	4.9	0.6
	SECAM	PAL	PLAY		3.3	4.9	0.7	3.3	4.9	2.7	3.3	4.9	3.9	1.7	4.9	2.4	1.7	4.9	0	3.3	4.9	0.7

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q8007			Q8008			Q8009			Q8010			Q8011			Q8012		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.4	4.9	2.6	1.9	4.9	0	0	0.2	0	1.9	4.9	0.6	1.9	4.9	0.6	0	2.1	0
	PAL	NTSC	PLAY		1.9	4.9	2.6	1.9	5.0	0	1.2	3.8	1.6	1.9	4.9	0.7	1.9	4.9	0.7	0	4.9	0
PAL		SECAM	REC		3.3	4.9	2.7	3.3	4.9	3.9	0	0.2	0	3.3	4.9	0.6	3.3	4.9	0.6	0	4.9	0
	SECAM	PAL	PLAY		3.3	4.9	2.7	3.3	4.9	3.9	1.2	3.6	1.8	3.3	4.9	0.7	3.3	4.9	0.7	0	4.9	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR3001			QR3002			QR3003			QR3004			QR3005			QR3006		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		2.9	3.0	4.5	0	0.1	5.0	5.0	4.9	0	0	4.9	0.2	4.9	4.8	0	0	0	0
	PAL	NTSC	PLAY		3.2	3.4	5.0	0	6.0	0	5.0	4.9	0	0	0.1	4.9	4.9	0.9	5.1	0	0	0
PAL		SECAM	REC		2.9	3.0	4.5	0	0.1	5.0	5.0	0	4.9	0	5.0	0.2	4.9	4.8	0	0	0	0
	SECAM	PAL	PLAY		3.2	3.4	5.0	0	5.6	0	5.0	0	4.9	0	0.1	4.9	4.9	0.9	5.1	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR3007			QR3008			QR3009											
				PIN NO.	E	C	B	E	C	B	E	C	B									
NTSC		PAL	REC		0	0	12.0				0	5.4	0									
	PAL	NTSC	PLAY		0	4.2	0.1				0	0.1	5.0									
PAL		SECAM	REC		0	0	12.0				0	5.4	0									
	SECAM	PAL	PLAY		0	4.2	0.1				0	0.1	5.1									

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR8001			QR8002			QR8003											
				PIN NO.	E	C	B	E	C	B	E	C	B									
NTSC		PAL	REC		0	0.2	0	0	0	4.4	4.9	1.9	4.9									
	PAL	NTSC	PLAY		0	2.3	0	0	0	4.4	5.0	1.9	4.9									
PAL		SECAM	REC		0	0.1	0	0	0	4.4	5.0	3.3	4.9									
	SECAM	PAL	PLAY		0	0.1	0	0	0	4.4	5.0	3.3	4.9									

MAIN C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC2001																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	STOP		9.2	0	9.1	0	1.6	1.7	1.7	1.7	1.7	1.6	2.1	0	4.9	3.0	2.8	0.2	0	3.8	0.7	0
	PAL	NTSC	PLAY		0.4	0.1	2.1	0	1.7	1.7	1.7	1.7	1.7	1.7	0	0	4.9	3.0	2.8	2.5	4.0	3.8	0.7	0.1
PAL		SECAM	STOP		10.5	0	10.4	0	1.7	1.7	1.7	1.7	1.6	1.7	2.1	0	4.9	3.0	2.8	0.2	0	3.8	0.7	0
	SECAM	PAL	PLAY		3.0	0.1	2.2	0	1.7	1.7	1.7	1.8	1.7	1.7	0	0	4.9	3.0	2.8	2.5	4.0	3.8	0.7	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC2001			
				PIN NO.	21	22	23	24
NTSC		PAL	STOP		0	2.7	8.6	12.8
	PAL	NTSC	PLAY		0	4.0	0.9	9.7
PAL		SECAM	STOP		0	2.7	9.8	12.8
	SECAM	PAL	PLAY		0	4.0	2.2	9.7

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8001															
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	STOP		0	2.2	5.0	0.3	5.0	4.7	0.3	0	5.0	0	0	0	0	5.0	0	5.0
	PAL	NTSC	PLAY		0	0.4	5.0	0.3	5.0	4.7	0.3	0	5.0	0	0	0	0	5.0	0	5.0
PAL		SECAM	STOP		0	2.2	5.0	0.3	5.0	4.7	0.3	0	5.0	0	0	0	0	5.0	0	5.0
	SECAM	PAL	PLAY		0	2.2	5.0	0.3	5.0	4.7	0.3	0	5.0	0	0	0	0	5.0	0	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8002						
				PIN NO.	1	2	3	4	5	6	7
NTSC		PAL	STOP		0.3	0	0.2	0	0	0	0.2
	PAL	NTSC	PLAY		3.3	0	3.6	0	3.6	2.0	4.9
PAL		SECAM	STOP		0.2	0	0.2	0	0	0	0.2
	SECAM	PAL	PLAY		3.3	0	3.7	0	3.5	2.3	4.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Y/C PACK PIN																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	STOP		0	0	0.4	0.3	2.5	0.4	2.1	0	4.7	0	2.2	0	0	0	0	3.0	0.2	4.6	5.0	5.1
	PAL	NTSC	PLAY		0	0	0.4	0.3	2.5	0.4	2.2	0	0.8	0	2.6	0	0	0	3.2	3.4	2.4	3.5	5.0	5.1
PAL		SECAM	STOP		0	0	0.4	0.4	2.5	0.4	2.1	0	3.1	0.9	2.2	0	0	0	0	3.0	0.2	3.3	3.9	0.1
	SECAM	PAL	PLAY		0	0	0.4	0.4	2.5	0.4	2.1	0	0.9	0	2.6	0	0	0	3.2	3.4	2.4	3.2	4.4	4.7

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Y/C PACK PIN														
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
NTSC		PAL	STOP		0	12.2	0	0.2	5.0	0.2	0.3	0.4	0	4.9	0	0	0	2.3	0
	PAL	NTSC	PLAY		0	12.2	0	0.1	5.0	4.9	0.3	0.4	0	5.0	2.4	0	0	2.3	0
PAL		SECAM	STOP		0	12.2	4.2	0	5.0	0.2	0.3	0.4	0	4.9	0	0	0	2.3	0
	SECAM	PAL	PLAY		0	12.2	0	0.2	5.0	4.9	0.3	0.3	0	5.0	0	0	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	S-DETECT PACK PIN													
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NTSC		PAL	STOP		0.2	0.4	0	4.9	0.1	0	4.9	0	0	0	0	0	0	4.9
	PAL	NTSC	PLAY		4.9	2.6	0	4.9	0	0	4.9	0	0	3.2	0	1.7	0	5.0
PAL		SECAM	STOP		0.2	0.4	0	0	0	0	4.9	0	0	0	0	0	0	4.9
	SECAM	PAL	PLAY		4.9	2.6	0	0	0	0	4.9	0	0	3.2	0	1.7	0	5.0

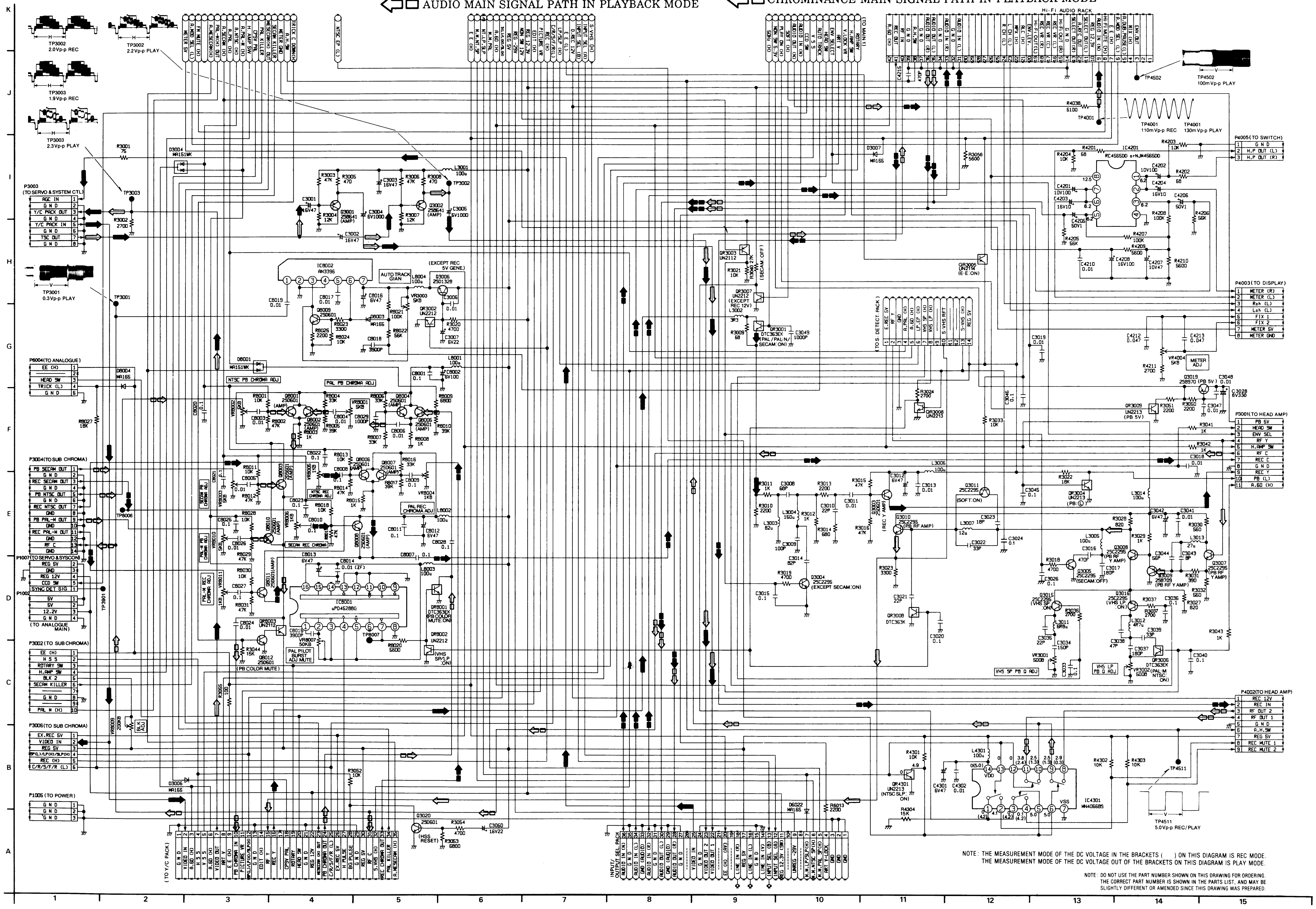
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	INPUT SELECT PACK PIN																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	STOP		0	0	0	0.2	4.4	0.2	0.2	0	−28.4	0	2.2	0	4.5	0.2	0	0	4.9	0	0	4.8
	PAL	NTSC	PLAY		0	0	0	0.2	4.4	0.2	0.2	0	−28.4	0	12.2	0	4.5	0	0	0	5.0	0	0	0.9
PAL		SECAM	STOP		0	0	0	0.2	4.4	0.2	0.2	0	−28.4	0	12.2	0	4.5	0.2	0	0	4.9	0	0	4.8
	SECAM	PAL	PLAY		0	0	0	0.2	4.4	0.2	0.2	0	−28.3	0	12.2	0	4.5	0.2	0	0	5.0	0	0	0.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	INPUT SELECT PACK PIN															
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
NTSC		PAL	STOP		0	0	3.0	0	5.0	0	0	0	0	0	0	0.1	0	0.1	0	0
	PAL	NTSC	PLAY		0	0	3.0	0	5.0	0	0	0	0	0	0	0.1	0	0.1	0	0
PAL		SECAM	STOP		0	0	3.0	0	5.1	0	0	0	0	0	0	0.1	0	0.1	0	0
	SECAM	PAL	PLAY		0	0	3.0	0	5.1	0	0	0	0	0	0	0.1	0	0.1	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	SHORT PROTECT PACK PIN							
				PIN NO.	1	2	3	4	5	6	7	8
NTSC		PAL	STOP		0	4.4	13.6	45.6	12.9	5.4	4.2	0
	PAL	NTSC	PLAY		0	4.4	13.7	45.5	12.9	5.4	4.2	0
PAL		SECAM	STOP		0	4.4	13.6	45.5	12.9	5.4	3.5	0
	SECAM	PAL	PLAY		0	4.4	13.6	45.5	12.9	5.4	0	0

MAIN SCHEMATIC DIAGRAM (2/2)

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
LUMINANCE MAIN SIGNAL PATH IN REC MODE
LUMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE
CHROMINANCE MAIN SIGNAL PATH IN REC MODE
CHROMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE


TP3002
2.0Vp-p REC
TP3002
2.2Vp-p PLAY
TP3003
1.9Vp-p REC
TP3003
2.3Vp-p PLAY
TP3001
0.3Vp-p PLAY
P3003 (TO SERVO & SYSTEM CTL)
P6004 (TO ANALOGUE)
P3004 (TO SUB CHROMA)
P1007 (TO SERVO & SYSCON)
P1002 (TO ANALOGUE MAIN)
P3002 (TO SUB CHROMA)
P3005 (TO SUB CHROMA)
P1005 (TO POWER)
IC8002
AN3396
AUTO TRACK GAIN
IC8001
μPD4528BG
NTSC PB CHROMA ADJ
PAL PB CHROMA ADJ
PAL REC CHROMA ADJ
PAL PILOT BURST ADJ MUTE
(PB COLOR MUTE)
(TO Y/C PACK)
INPUT/OUTPUT SEL PACK
(TO S. DETECT PACK)
Hi-Fi AUDIO RACK
TP4502
100mVp-p PLAY
TP4001
110mVp-p REC
130mVp-p PLAY
IC4201
RC4558D or NJM4558D
P4005 (TO SWITCH)
P4003 (TO DISPLAY)
METER ADJ
P3001 (TO HEAD AMP)
P4002 (TO HEAD AMP)
VHS SP PB Q ADJ
VHS LP PB Q ADJ
IC4301
MN4066BS
TP4511
5.0Vp-p REC/PLAY
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAY MODE.

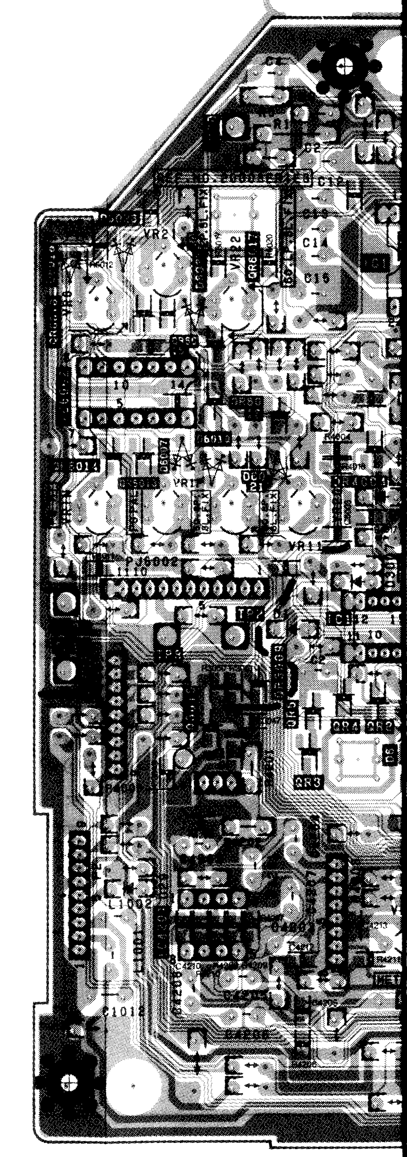
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

MAIN C.B.A. (VEP03

SHORT PROTECT PACK C.B.A.	
Transistor	
Q1301 Q1302	G-4 G-4
Transistor & Resistor	
QR1301	G-4
Integrated Circuit	
IC1301	G-4

ADDRESS INFORMATION

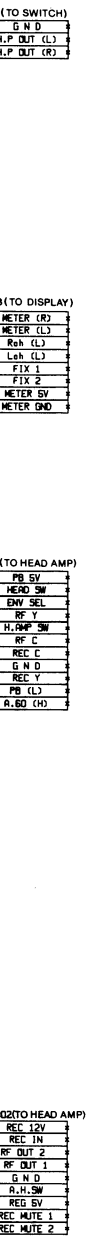
MAIN C.B.A. (VE


A
B
C
D
E
F
G
H
1
2

MAIN C.B.A. (VEP03794B) / SHORT PROTECT PACK C.B.A. (VEP00Q56A)

SHORT PROTECT PACK C.B.A.	
Transistor	
Q1301 Q1302	G-4 G-4
Transistor & Resistor	
QR1301	G-4
Integrated Circuit	
IC1301	G-4

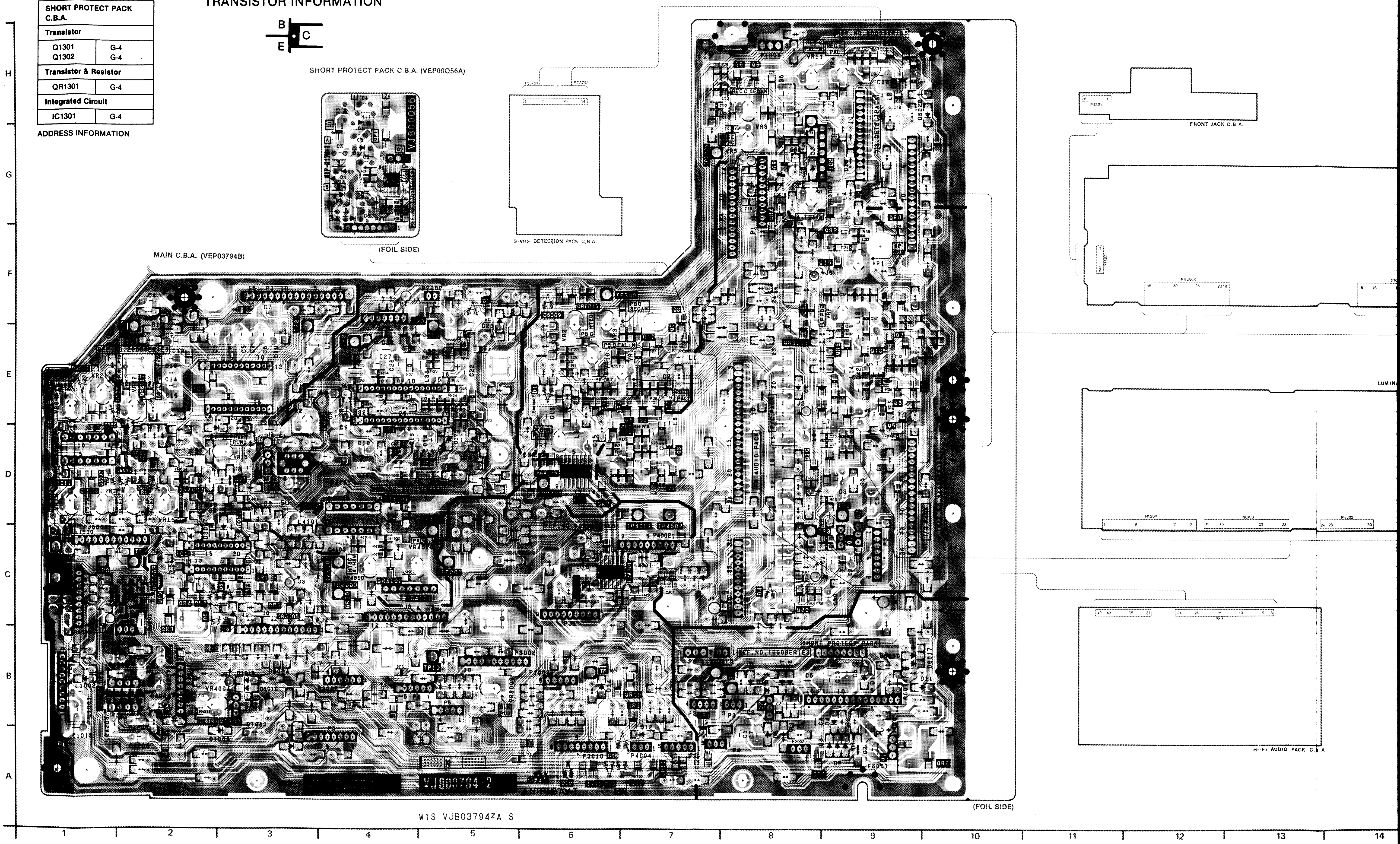
ADDRESS INFORMATION


(TO SWITCH)
G N D
.P OUT (L)
.P OUT (R)
(TO DISPLAY)
METER (R)
METER (L)
Roh (L)
Loh (L)
FIX 1
FIX 2
METER 5V
METER GND
(TO HEAD AMP)
PB 5V
HEAD SW
ENV SEL
RF Y
H.AMP SW
RF C
REC C
G N D
REC Y
PB (L)
A.60 (H)
02(TO HEAD AMP)
REC 12V
REC IN
RF OUT 2
RF OUT 1
G N D
A.H.SW
REG 5V
REC MUTE 1
REC MUTE 2

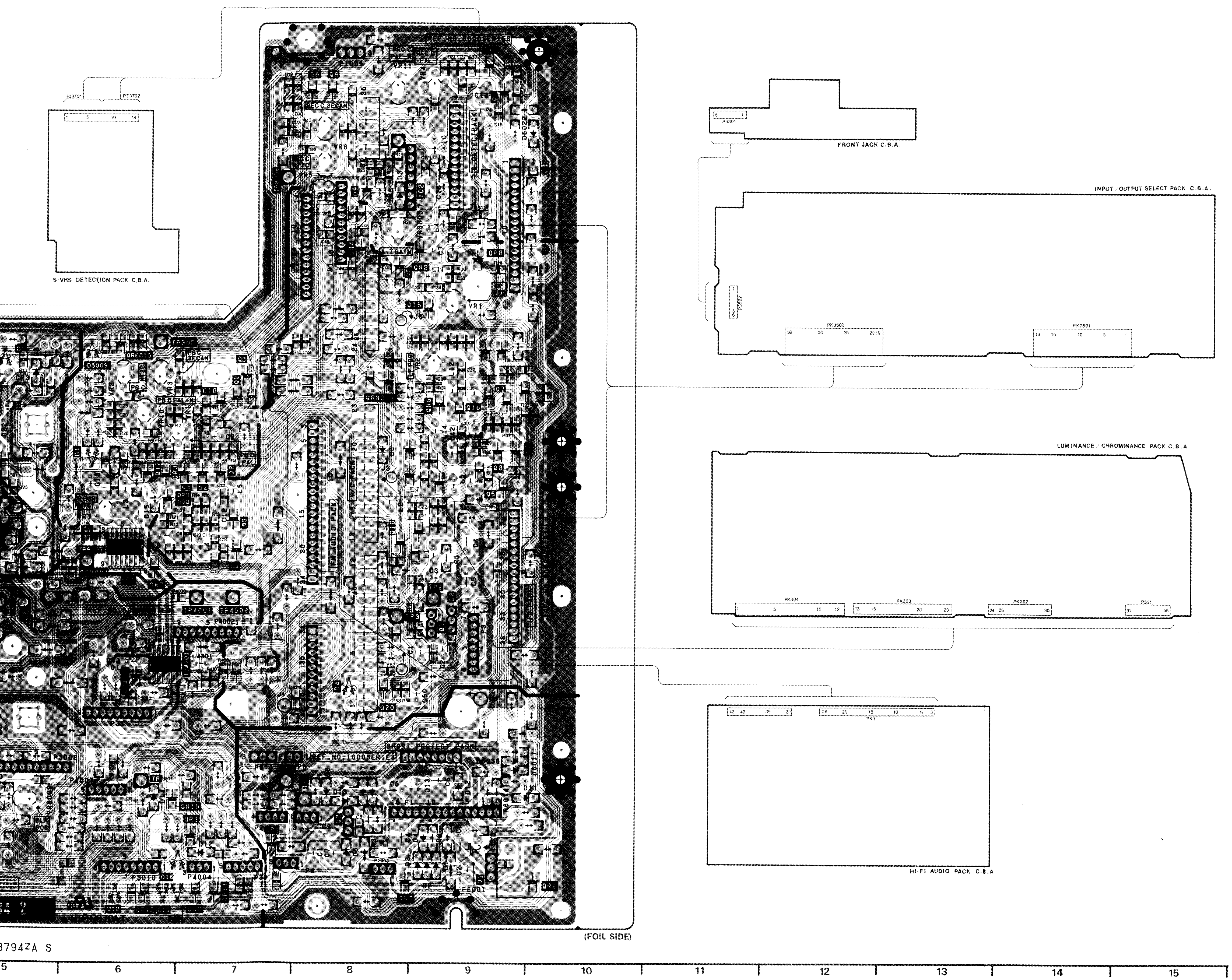
MODE.
MODE.

DERING.
MAY BE
EPARED.

TRANSISTOR INFORMATION


B
C
E
SHORT PROTECT PACK C.B.A. (VEP00Q56A)
VJB00056
(FOIL SIDE)
PJ3701
PT3702
1
5
10
14
S-VHS DETECTION PACK C.B.A.
MAIN C.B.A. (VEP03794B)
REF. NO. 10000SERIES
SHORT PROTECT PACK
FM AUDIO PACK
S-DETECT PACK
VJB00794 2
W1S VJB03794ZA S
(FOIL SIDE)
P4801
FRONT JACK C.B.A.
P3502
PK3502
36
30
25
20 19
18
15
LUMIN
PK304
1
5
10
12
PK303
13
15
20
23
PK302
24
25
30
42
40
35
31
24
20
15
10
5
3
PK1
HI-FI AUDIO PACK C.B.A
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14

PACK C.B.A. (VEP00Q56A)



MAIN C.B.A. (SYSTEM CONTROL SECTION)	
Transistor & Resistor	
QR6001	C-3
QR6002	C-2
QR6003	B-2
QR6004	C-2
QR6005	C-2
QR6006	C-3
QR6008	A-7
QR6009	B-7
QR6010	B-7
QR6011	A-7
QR6012	A-6
QR6013	D-1
QR6014	D-1
QR6015	D-1
QR6016	D-2
QR6017	E-2
QR6018	E-1
QR6019	F-6
QR6020	C-4
QR6021	C-3
Integrated Circuit	
IC6001	C-2
IC6002	D-1
Test Point	
TP6010	B-5
TP6100	C-4
Connector	
P6001	C-1
P6002	B-1
P6003	A-4
P6004	B-4
P6005	B-5
PJ6001	C-6
PJ6002	C-1
PJ6003	C-4
PJ6004	C-4

ADDRESS INFORMATION

MAIN C.B.A. (AUDIO SECTION)	
Transistor	
Q4001	D-3
Transistor & Resistor	
QR4003	F-5
QR4004	D-2
QR4007	D-3
QR4101	D-4
QR4102	C-4
QR4301	C-6
Integrated Circuit	
IC4001	D-4
IC4101	C-5
IC4102	D-3
IC4201	B-1
IC4301	C-7
Test Point	
TP4001	C-7
TP4002	E-4
TP4003	E-5
TP4502	C-7
TP4511	D-5
Adjustment	
VR4002	E-3
VR4004	B-3
VR4510	C-4
VR4520	C-5
Connector	
P4001	F-4
P4002	C-7
P4003	B-2
P4004	A-7
P4005	B-1

ADDRESS INFORMATION

MAIN C.B.A. (SERVO SECTION)	
Integrated Circuit	
IC2001	E-2
Test Point	
TP2001	C-5
TP2002	C-2
TP2008	C-1
TP2015	C-1
TP2020	E-2
TP2021	E-3
TP2026	C-1
Adjustment	
VR2001N	D-1
VR2001P	D-1
VR2006	E-1
VR2011	D-2
VR2013	D-3
VR2020	D-2
VR2021	E-1
VR2022	E-2
Connector	
P2001	F-3
P2002	F-5
P2003	A-8

ADDRESS INFORMATION

MAIN C.B.A. (CHROMINANCE SECTION)	
Transistor	
Q8001	F-6
Q8002	F-6
Q8003	F-7
Q8004	F-6
Q8005	F-6
Q8006	H-8
Q8007	H-9
Q8008	H-8
Q8009	G-8
Q8010	F-6
Q8011	H-9
Q8012	E-6
Transistor & Resistor	
QR8001	D-6
QR8002	D-6
QR8003	F-6
Integrated Circuit	
IC8001	D-6
IC8002	G-9
Test Point	
TP8006	G-7
TP8007	D-6
TPGND	F-7
Adjustment	
VR8001	F-6
VR8002	E-6
VR8003	E-6
VR8004	H-9
VR8005	G-8
VR8006	G-8
VR8007	D-6
VR8009	B-5
VR8010	E-6
VR8011	H-9

ADDRESS INFORMATION

MAIN C.B.A. (POWER SECTION)	
Transistor	
Q1001	A-9
Q1002	B-8
Q1003	B-3
Transistor & Resistor	
QR1001	B-7
QR1002	A-10
QR1003	A-8
Test Point	
TP1001	B-8
TP1002	B-8
Connector	
P1001	B-9
P1002	B-7
P1003	B-8
P1004	A-8
P1005	H-8
P1006	B-7
P1007	B-6
P1008	B-8

ADDRESS INFORMATION

MAIN C.B.A. (LUMINANCE SECTION)	
Transistor	
Q3001	C-9
Q3002	D-9
Q3003	D-7
Q3004	D-7
Q3005	D-9
Q3006	F-9
Q3007	E-9
Q3008	E-9
Q3009	E-10
Q3010	D-8
Q3015	F-9
Q3016	E-9
Q3019	C-1
Q3020	C-8
Transistor & Resistor	
QR3001	E-8
QR3002	F-9
QR3003	D-7
QR3004	G-8
QR3005	C-3
QR3006	E-9
QR3007	C-7
QR3008	G-9
QR3009	C-2
Test Point	
TP3002	D-9
TP3003	C-9
TP3901	B-6
Adjustment	
VR3001	F-9
VR3002	F-9
VR3003	G-9
Connector	
P3001	F-8
P3002	B-6
P3003	C-9
P3004	G-8
P3006	B-4
P3010	A-6
P3011	A-7

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE PACK C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q301			Q302			Q303			Q304								
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B						
NTSC		PAL	REC		0	0	0.1	1.7	0	4.1	2.4	4.9	3.0	2.7	4.9	3.4						
	PAL	NTSC	PLAY		0	0	0.1	1.9	0	4.0	2.4	4.9	3.1	2.7	4.9	3.4						
PAL		SECAM	REC		0	0	0.1	2.0	0	5.0	2.4	4.9	3.0	2.7	4.9	3.4						
	SECAM	PAL	PLAY		0	0	0.1	1.5	0	3.7	2.4	4.9	3.1	2.7	4.9	3.4						

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q801			Q802														
				PIN NO.	E	C	B	E	C	B												
NTSC		PAL	REC		0.3	4.9	0.4	0.2	0	3.4												
	PAL	NTSC	PLAY		0.3	4.9	0.4	3.0	0	2.5												
PAL		SECAM	REC		0.3	4.9	0.4	0.2	0	3.4												
	SECAM	PAL	PLAY		0.3	4.9	0.4	4.0	0	3.4												

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR301			QR302			QR303			QR304			QR305			QR306		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0	0.1	0	0.1	0	0	0	0	0	2.5	0	0	1.9	0.3	0	0	4.7
	PAL	NTSC	PLAY		0	0	3.3	0	3.3	0	0	0	0	0	2.4	0.3	0	2.0	0.4	0	0.3	0.9
PAL		SECAM	REC		0	0	0.1	0	0.1	0	0	0	0	0	2.4	0	0	1.9	0.3	0	0	4.7
	SECAM	PAL	PLAY		3.3	0	0	0	3.3	0	0	0	0	0	2.4	0.3	0	2.0	0.4	0	0.3	0.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR307			QR308														
				PIN NO.	E	C	B	E	C	B												
NTSC		PAL	REC		0	0	0	0	0	0												
	PAL	NTSC	PLAY		0	0	0	0	0.8	0												
PAL		SECAM	REC		0	0	0	0	0	0												
	SECAM	PAL	PLAY		0	0	0	0	0.8	0												

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR801			QR803														
				PIN NO.	E	C	B	E	C	B												
NTSC		PAL	REC		0	0	0	0	0	0												
	PAL	NTSC	PLAY		0	0	0	0	0	0												
PAL		SECAM	REC		0	0	0	0	0	0												
	SECAM	PAL	PLAY		0	0	0	0	0	0												

LUMINANCE & CHROMINANCE PACK C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC301																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0.3	0.3	2.8	2.2	1.9	4.8	2.7	2.7	2.0	2.7	3.1	0	2.0	0	2.0	1.0	2.0	0.5	0	2.0
	PAL	NTSC	PLAY		0.3	0.3	3.0	1.9	1.8	4.8	2.7	2.7	2.0	3.0	3.1	0	2.1	0	2.1	1.0	2.0	0.5	0	2.0
PAL		SECAM	REC		0.3	0.3	3.0	1.9	1.9	4.8	2.7	2.7	2.0	2.7	3.1	0	2.0	0	2.0	1.0	2.0	0.5	0	2.0
	SECAM	PAL	PLAY		0.3	0.3	2.8	1.9	1.8	4.8	2.7	2.7	2.0	2.8	3.2	0	2.1	0	2.1	1.0	2.1	0.5	0	2.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC301																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	REC		2.8	2.9	0	0.2	0	0	0.2	0	0.1	0	0	0	0.2	2.2	0	4.7	2.1	2.4	0	2.1
	PAL	NTSC	PLAY		2.8	3.4	3.2	4.8	0	0.8	4.8	2.8	2.5	1.4	0	2.7	2.0	2.5	0	0.9	2.0	2.4	0	2.1
PAL		SECAM	REC		2.8	2.9	0	0.2	0	0	0.2	0	0.1	0	0	0	0.2	2.2	0	4.7	2.1	2.3	0	2.1
	SECAM	PAL	PLAY		2.8	3.4	3.2	4.8	0	0.8	4.8	2.8	2.5	1.4	0	2.7	2.0	2.5	0	0.9	2.0	2.4	0	2.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC301										IC302									
				PIN NO.	41	42									1	2	3	4	5	6	7	8		
NTSC		PAL	REC		2.7	0									9.3	0	4.9	3.4	3.3	2.3	1.6	5.0		
	PAL	NTSC	PLAY		2.7	0									9.3	0	4.9	3.4	3.3	2.3	1.6	5.0		
PAL		SECAM	REC		2.7	0									9.3	0	4.9	3.4	3.3	2.3	1.6	5.0		
	SECAM	PAL	PLAY		2.7	0									9.3	0	4.8	3.4	3.3	2.3	1.6	5.0		

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC801																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0	0	0	4.5	0	4.1	2.7	4.8	0	2.2	0	0	0	0	2.3	4.2	0	4.8	0	3.2
	PAL	NTSC	PLAY		0	0	0	3.4	0	1.5	2.7	4.8	0	2.6	0	0	1.6	0	2.3	4.2	0	0	0	3.3
PAL		SECAM	REC		0	0	0	3.2	0	4.1	2.7	4.8	0	2.2	0	0	0	0	2.3	4.2	0	4.8	0	3.2
	SECAM	PAL	PLAY		0	0	0	3.1	0	5.0	2.7	4.8	0	3.0	0	0	2.3	0	0	4.2	0	4.8	0	3.3

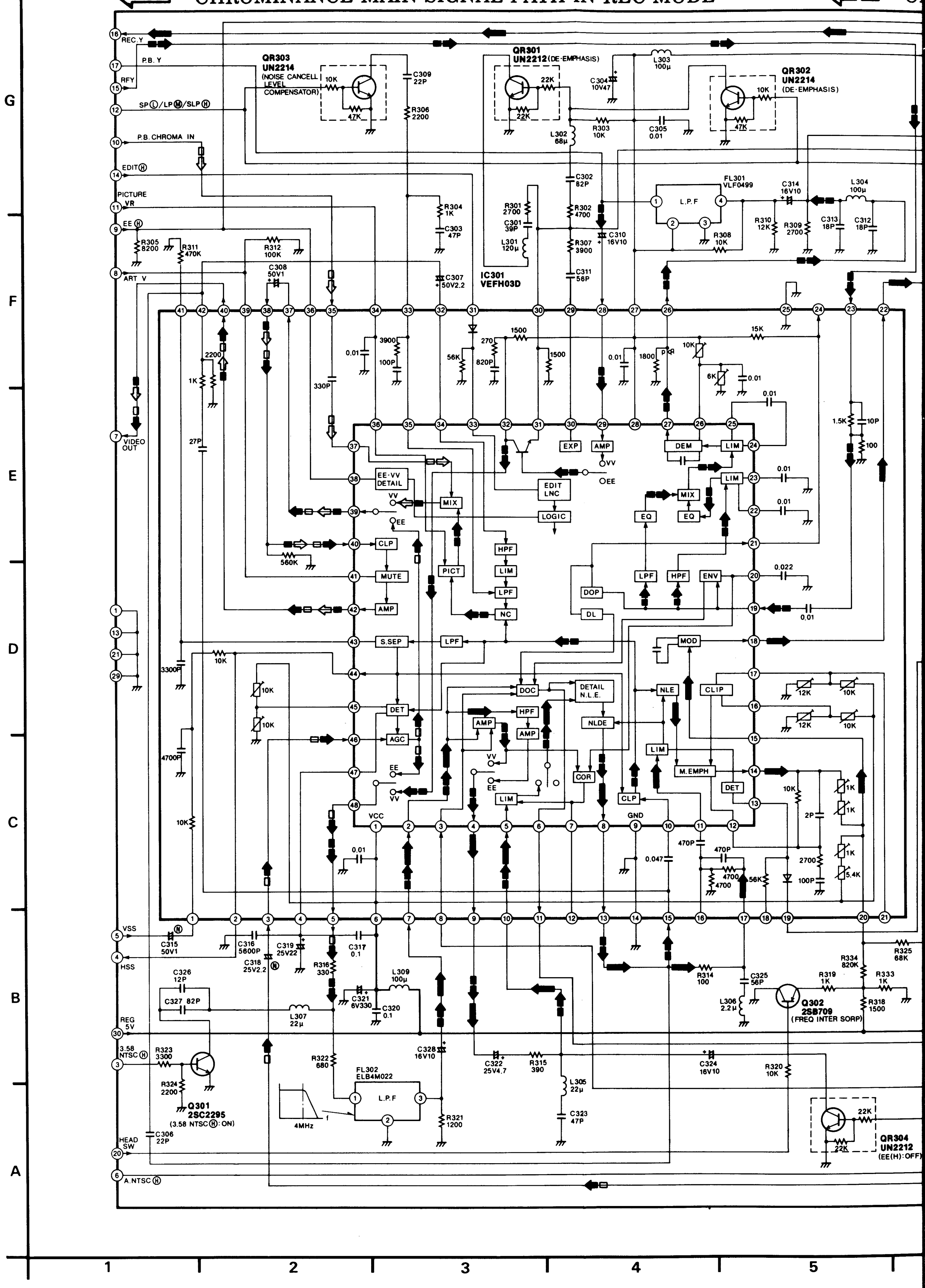
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC801																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
NTSC		PAL	REC		2.2	0	2.3	3.4	3.4	3.3	3.7	0	3.0	4.8	3.5	0.3	2.3	0.4	2.9	0	0.2	3.2		
	PAL	NTSC	PLAY		2.2	0	2.3	2.6	3.2	3.3	3.7	0.1	3.2	4.8	3.6	0.3	2.3	0.4	4.6	0	4.8	2.5		
PAL		SECAM	REC		2.2	0	2.3	3.4	0	0	3.7	0	3.0	4.8	3.6	0.3	2.3	0.4	4.6	0	0.2	3.4		
	SECAM	PAL	PLAY		2.2	0	2.3	2.6	3.3	3.3	3.7	0	3.3	4.8	3.6	0.3	2.3	0.4	5.0	0	4.8	3.4		

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	MESECAM PACK PIN																			
				PIN NO.	1	2	3	4	5	6	7	8	9											
NTSC		PAL	REC		4.6	0	0	0	2.7	0	0	0.2	4.9											
	PAL	NTSC	PLAY		4.6	0	0	0	2.7	0	0	4.9	4.9											
PAL		SECAM	REC		4.6	4.2	0	0	2.7	0	0	0.2	4.9											
	SECAM	PAL	PLAY		4.6	0	0	0	2.7	0	0	4.9	4.9											

LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRA

LUMINANCE MAIN SIGNAL PATH IN REC MODE

CHROMINANCE MAIN SIGNAL PATH IN REC MODE


G
F
E
D
C
B
A
1
2
3
4
5
REC Y
P.B. Y
RFY
SP Ⓛ/LP Ⓜ/SLP Ⓗ
P.B. CHROMA IN
EDIT Ⓗ
PICTURE VR
EE Ⓗ
ART V
VIDEO OUT
VSS
HSS
REG 5V
3.58 NTSC Ⓗ
HEAD SW
A.NTSC Ⓗ
QR303 UN2214 (NOISE CANCELL LEVEL COMPENSATOR)
QR301 UN2212 (DE-EMPHASIS)
QR302 UN2214 (DE-EMPHASIS)
IC301 VEFH03D
FL301 VLF0499
L.P.F
FL302 ELB4M022
4MHz
Q301 2SC2295 (3.58 NTSC Ⓗ: ON)
Q302 2SB709 (FREQ INTER SORP)
QR304 UN2212 (EE(H): OFF)
EE-VV DETAIL
MIX
CLP
MUTE
AMP
S.SEP
PICT
HPF
LIM
LPF
NC
EDIT LNC
LOGIC
EXP
DEM
EQ
DOP
DL
MOD
DOC
DETAIL N.L.E.
NLE
CLIP
NLDE
DET
AGC
COR
M.EMPH
VCC
GND

PACK SCHEMATIC DIAGRAM/MESECAM PACK SCHEMATIC DIAGRAM

ATH IN REC MODE

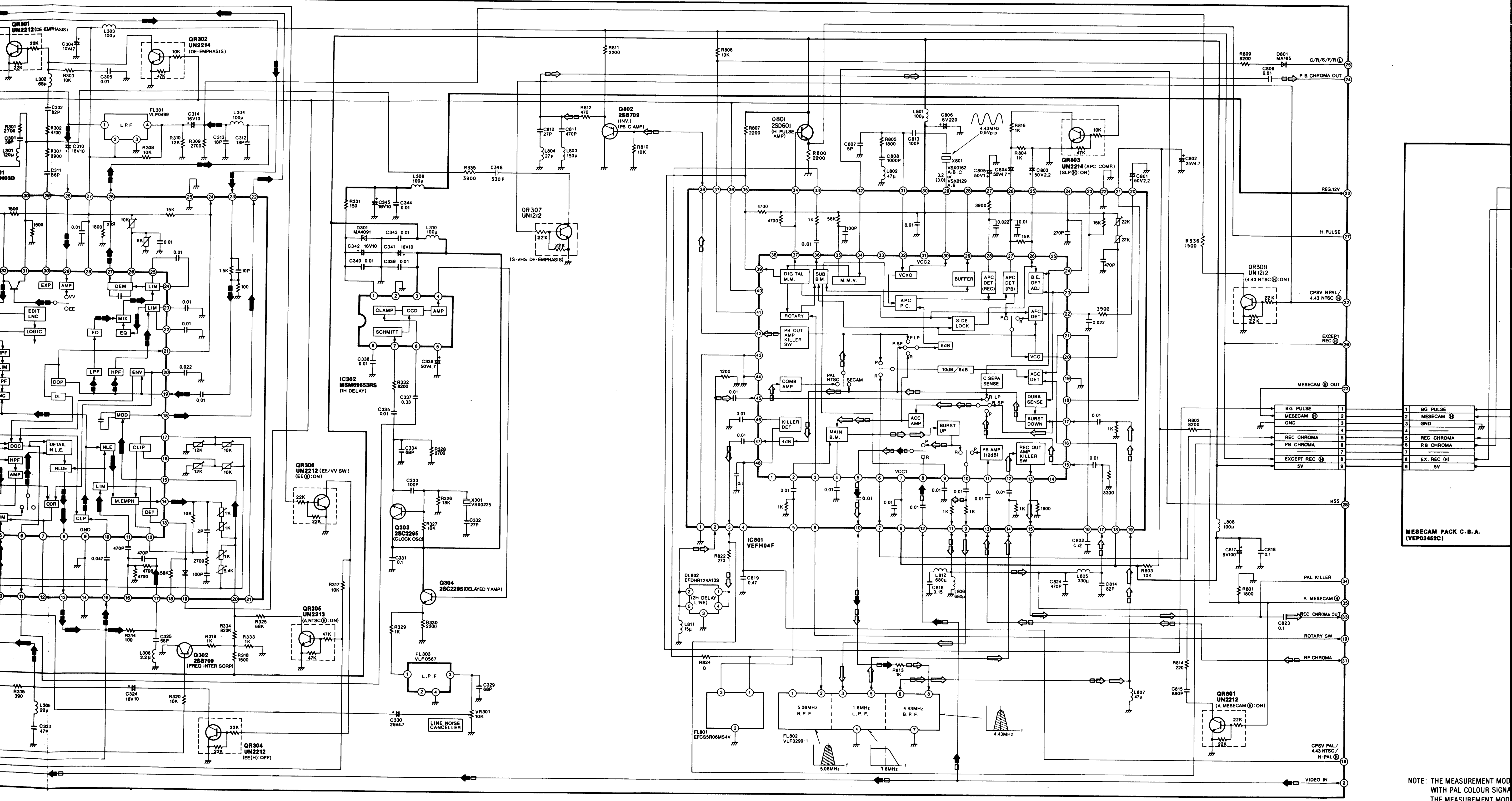
L PATH IN REC MODE

LUMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE

CHROMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE

VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE


QR301 UN2212 (DE-EMPHASIS)
QR302 UN2214 (DE-EMPHASIS)
FL301 VLF0499
L.P.F
IC302 MSM69653RS (1H DELAY)
CLAMP
CCD
AMP
SCHMITT
QR307 UN1212 (S-VHS DE-EMPHASIS)
QR306 UN2212 (EE/VV SW) (EE(H):ON)
Q303 2SC2295 (CLOCK OSC)
Q304 2SC2295 (DELAYED Y AMP)
QR305 UN2213 (A.NTSC(H):ON)
Q302 2SB709 (FREQ INTER SORP)
QR304 UN2212 (EE(H):OFF)
FL303 VLF0567
LINE NOISE CANCELLER
Q802 2SB709 (INV.) (PB C AMP)
Q801 2SD601 (H PULSE AMP)
X801 VSX0162 A.B.C or VSX0129 A.B
4.43MHz 0.5Vp-p
QR803 UN2214 (APC COMP.) (SLP(H):ON)
IC801 VEFH04F
DIGITAL M.M.
SUB B.M.
M.M.V.
VCXO
BUFFER
APC DET (REC)
APC DET (PB)
B.E. DET ADJ.
ROTARY
PB OUT AMP KILLER SW
APC P.C.
SIDE LOCK
AFC DET
VCO
ACC DET
COMB AMP
C.SEPA SENSE
DUBB SENSE
BURST DOWN
KILLER DET
ACC AMP
BURST UP
MAIN B.M.
PB AMP (12dB)
REC OUT AMP KILLER SW
DL802 EFDHR124A13S (2H DELAY LINE)
FL801 EFCS5R06MS4V
FL802 VLF0299-1
5.06MHz B.P.F.
1.6MHz L.P.F.
4.43MHz B.P.F.
QR308 UN1212 (4.43 NTSC(H):ON)
QR801 UN2212 (A.MESECAM(H):ON)
C/R/S/F/R(L)
P.B. CHROMA OUT
REG.12V
H.PULSE
CPSV N.PAL/4.43 NTSC(H)
EXCEPT REC(H)
MESECAM(H) OUT
HSS
PAL KILLER
A. MESECAM(H)
REC CHROMA OUT
ROTARY SW
RF CHROMA
CPSV PAL/4.43 NTSC/N-PAL(H)
VIDEO IN
BG PULSE
MESECAM(H)
GND
REC CHROMA
PB CHROMA
EXCEPT REC(H)
5V
EX. REC (H)
MESECAM PACK C.B.A. (VEP03452C)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

NOTE: THE MEASUREMENT MOD
WITH PAL COLOUR SIGNA
THE MEASUREMENT MOD
WITH PAL COLOUR SIGNA

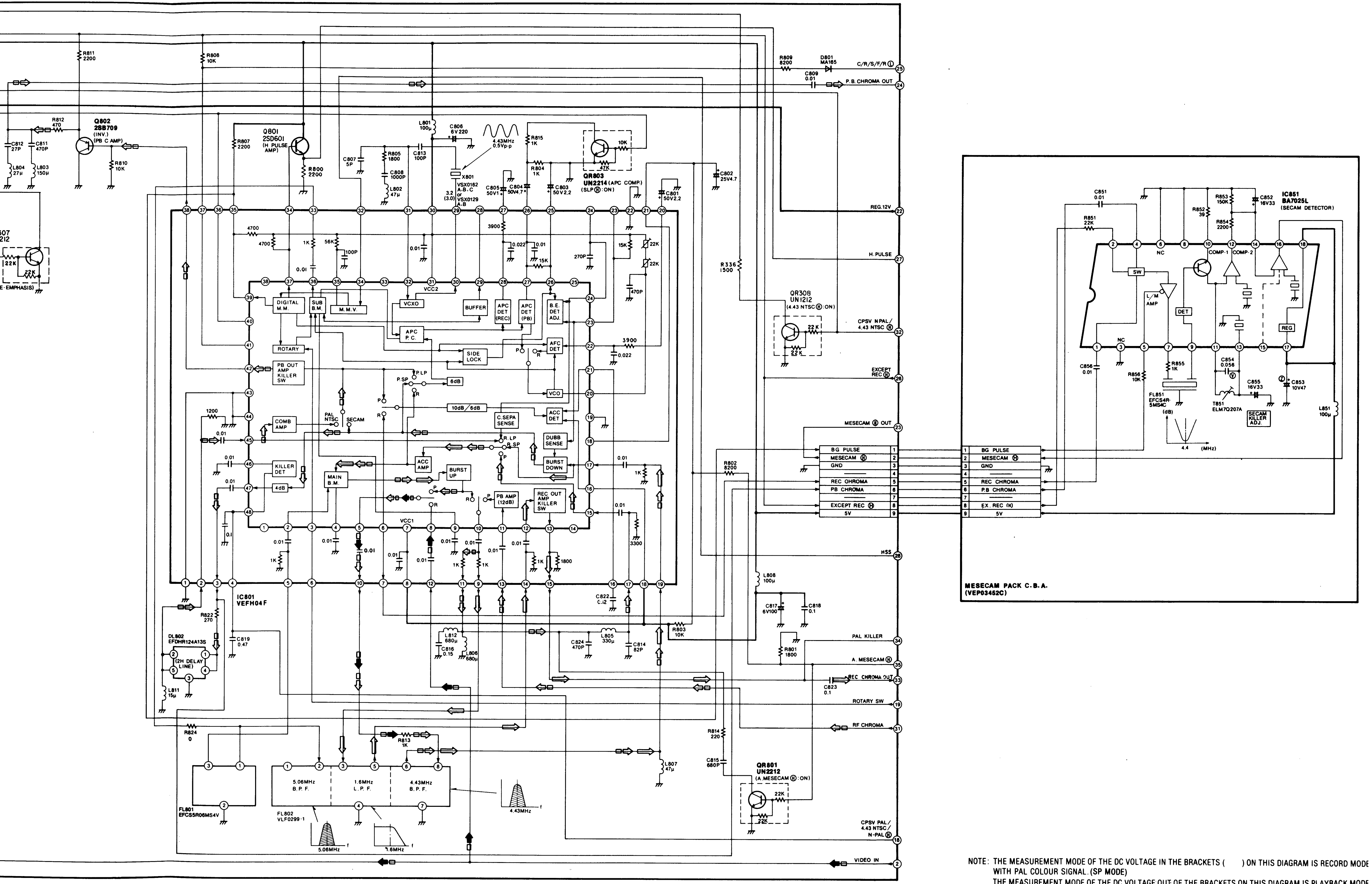
EMATIC DIAGRAM

LAYBACK MODE

N PLAYBACK MODE

◀□ VIDEO MAIN SIGNAL PATH IN REC MODE

◁■ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE



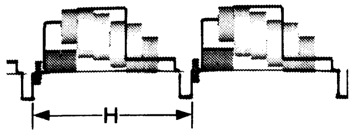
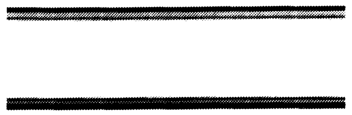
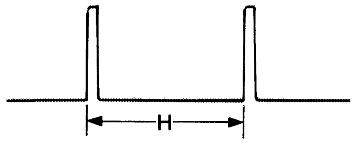
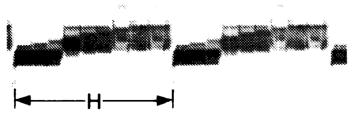
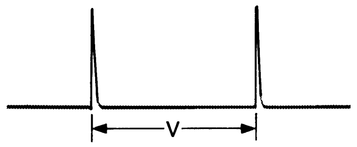
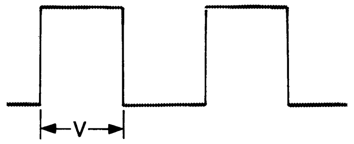
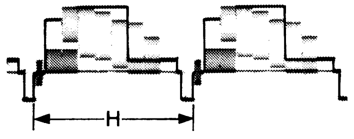
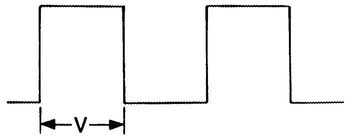
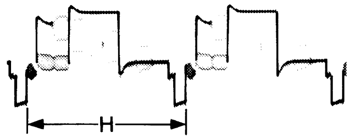
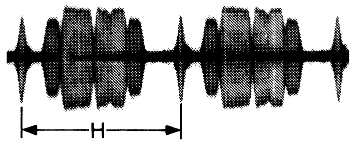
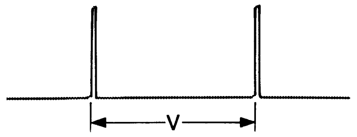
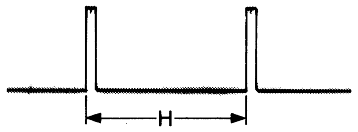
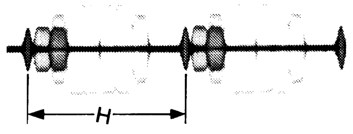
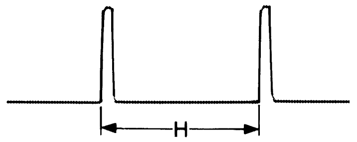
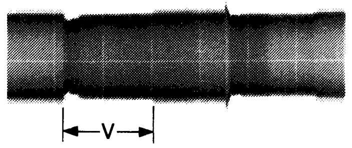
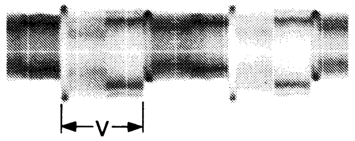
R811 2200
R808 10K
R812 470
Q802 2SB709 (INV.) (PB C AMP)
C812 27P
C811 470P
L804 27μ
L803 150μ
R810 10K
R807 2200
Q801 2SD601 (H. PULSE AMP)
R800 2200
L801 100μ
C806 6V220
4.43MHz 0.5Vp-p
R815 1K
R804 1K
C807 5P
R805 1800
C813 100P
C808 1000P
L802 47μ
X801 VSX0162 A.B.C or VSX0129 A.B
C805 50V1
C804 50V4.7
C803 50V2.2
QR803 UN2214 (APC COMP.) (SLP Ⓗ:ON)
10K
47K
C802 25V4.7
C801 50V2.2
R809 8200
D801 MA165
C809 0.01
C/R/S/F/R Ⓛ
P.B. CHROMA OUT
REG.12V
H.PULSE
R336 1500
QR308 UN1212 (4.43 NTSC Ⓗ:ON)
22K
CPSV N.PAL/ 4.43 NTSC Ⓗ
EXCEPT REC Ⓗ
MESECAM Ⓗ OUT
DIGITAL M.M.
SUB B.M.
M.M.V.
VCXO
BUFFER
APC DET (REC)
APC DET (PB)
B.E. DET ADJ.
APC P.C.
SIDE LOCK
AFC DET
ROTARY
PB OUT AMP KILLER SW
6dB
10dB/6dB
VCO
P.SP
P.LP
PAL NTSC
SECAM
C.SEPA SENSE
ACC DET
COMB AMP
DUBB SENSE
BURST DOWN
KILLER DET
ACC AMP
BURST UP
4dB
MAIN B.M.
PB AMP (12dB)
REC OUT AMP KILLER SW
VCC1
VCC2
IC801 VEFH04F
DL802 EFDHR124A13S
(2H DELAY LINE)
L811 15μ
R822 270
C819 0.47
R824 0
R813 1K
FL801 EFCS5R06MS4V
FL802 VLF0299-1
5.06MHz B.P.F.
1.6MHz L.P.F.
4.43MHz B.P.F.
5.06MHz
1.6MHz
4.43MHz
L807 47μ
L812 680μ
C816 0.15
L806 680μ
C824 470P
L805 330μ
C814 82P
R803 10K
C822 C.12
L808 100μ
C817 6V100
C818 0.1
R801 1800
R802 8200
R814 220
C815 680P
QR801 UN2212 (A.MESECAM Ⓗ:ON)
C823 0.1
PAL KILLER
A. MESECAM Ⓗ
REC CHROMA OUT
ROTARY SW
RF CHROMA
HSS
CPSV PAL/ 4.43 NTSC/ N-PAL Ⓗ
VIDEO IN
BG PULSE
MESECAM Ⓗ
GND
REC CHROMA
PB CHROMA
EXCEPT REC Ⓗ
EX. REC (H)
5V
C851 0.01
R851 22K
R853 150K
R852 39
R854 2200
C852 16V33
IC851 BA7025L (SECAM DETECTOR)
SW
L/M AMP
DET
COMP-1
COMP-2
REG
NC
C856 0.01
R856 10K
R855 1K
FL851 EFCS4R-5MS4C
(dB)
4.4 (MHz)
C854 0.056
T851 ELM7Q207A
C855 16V33
C853 10V47
SECAM KILLER ADJ.
L851 100μ
MESECAM PACK C.B.A. (VEP03452C)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

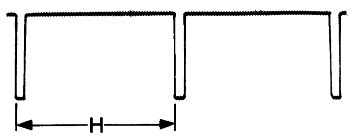
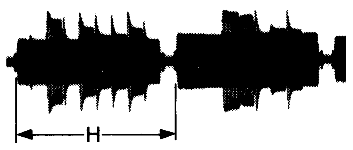
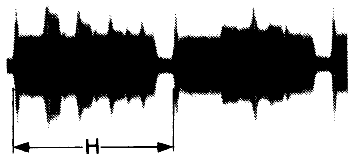
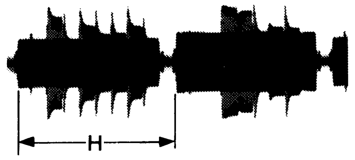
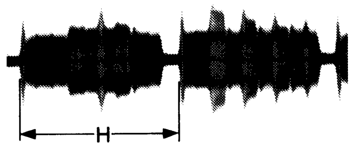
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

8 9 10 11 12 13 14 15 16 17 18

WAVEFORM OF LUMINANCE & CHROMINANCE PACK PINS

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2	 REC 1.0Vp-p	16	 REC 0.9Vp-p
4	 REC/PLAY 4.4Vp-p	17	 PLAY 0.35Vp-p
5	 REC/PLAY 2.0Vp-p	19	 REC/PLAY 5.0Vp-p
7	 REC 2.0Vp-p	20	 REC/PLAY 5.0Vp-p
7	 PLAY 2.4Vp-p	24	 PLAY 0.3Vp-p
8	 PAUSE 5.2Vp-p	27	 REC/PLAY 4.5Vp-p
15	 PLAY 0.3Vp-p	28	 REC 4.5Vp-p
15	 PLAY 1.5Vp-p	31	 PLAY 0.3Vp-p

WAVEFORM OF MESECAM PACK PINS

PIN NO.	WAVEFORM
1	 REC/PLAY (SECAM) 4.5Vp-p
5	 REC (SECAM) 0.5Vp-p
5	 PLAY (SECAM) 0.4Vp-p
6	 REC (SECAM) 0.55Vp-p
6	 PLAY (SECAM) 0.8Vp-p

MESECAM PACK C.B.A. IC DC VOLTAGE CHART

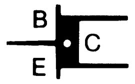
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC851																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
NTSC		PAL	REC		3.5	0.2	0	3.5	4.6	0	4.4	0	3.0	0	3.5	0.2	3.5	0.1	0	0	4.8	4.9		
	PAL	NTSC	PLAY		3.5	0	0	3.5	4.6	0	4.4	0	3.0	0.1	3.4	0.2	3.5	0.1	0	0	4.8	4.9		
PAL		SECAM	REC		3.5	0.2	0	3.5	4.6	0	4.4	0	3.0	0	3.5	4.2	3.5	4.1	0	4.2	4.9	4.9		
	SECAM	PAL	PLAY		3.5	1.1	0	3.5	4.6	0	4.4	0	3.0	0	3.7	0	3.7	0	0	0	4.9	4.9		

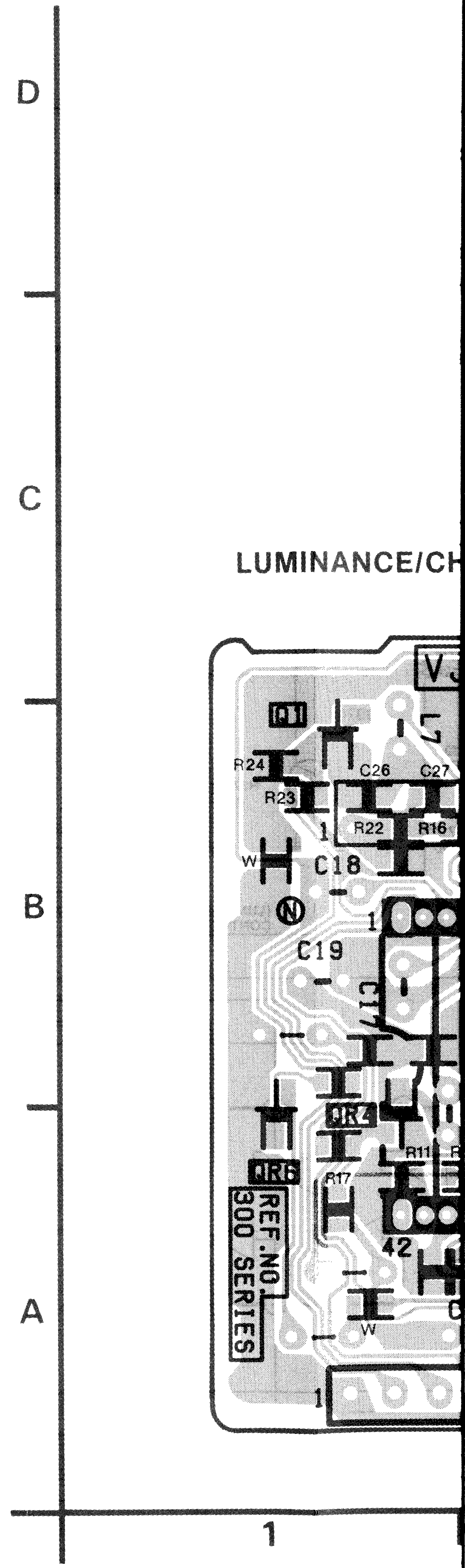
LUMINANCE & CHROMINANCE PACK C.B.A.

LUMIANCE & CHROMIANCE PACK C.B.A.	
Transistor	
Q301	B-1
Q302	C-3
Q303	B-4
Q304	B-3
Q801	A-5
Q802	B-5
Q803	A-4
Q804	B-4
Transistor & Resistor	
QR301	B-2
QR302	B-3
QR303	A-2
QR304	A-1
QR305	B-3
QR306	A-1
QR801	B-6
QR802	A-6
QR803	B-6
Integrated Circuit	
IC301	A-2
IC302	B-3
IC801	A-6
Adjustment	
VR301	A-3

ADDRESS INFORMATION

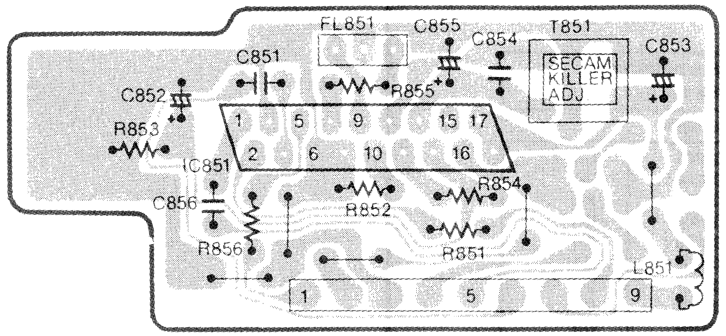
TRANSISTOR INFORMATION





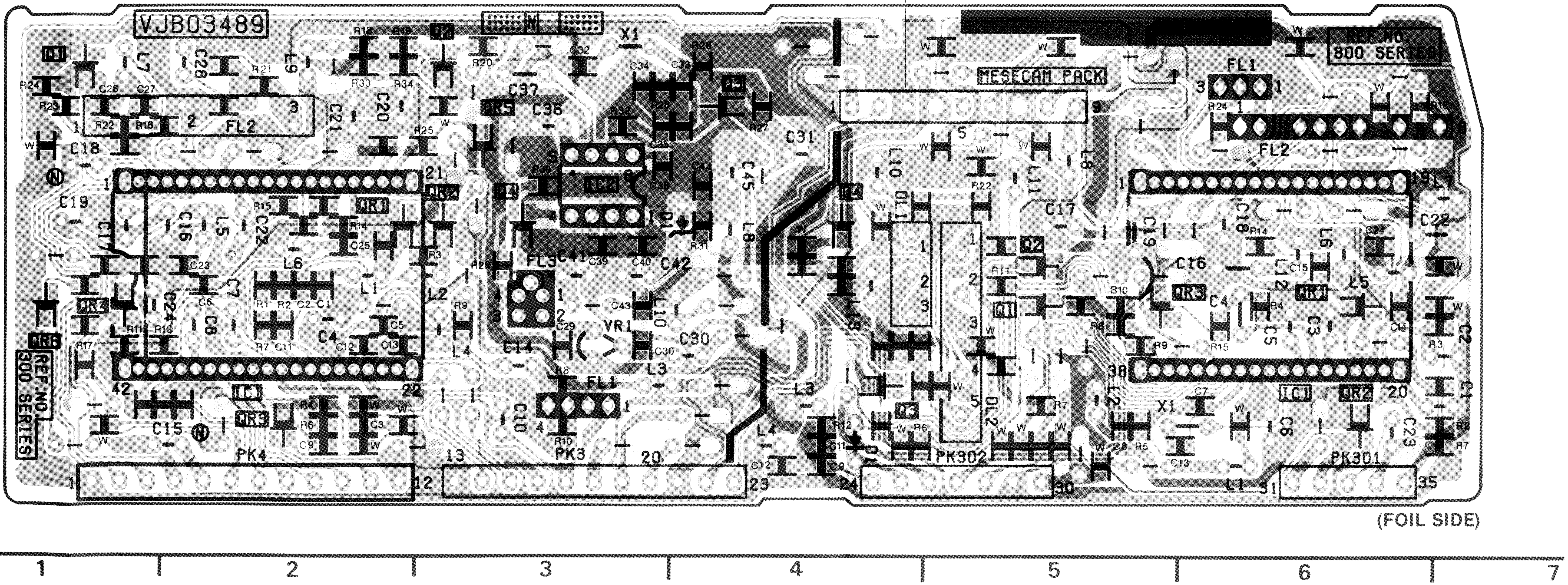
INANCE PACK C.B.A. (VEP03489D)/MESECAM PACK C.B.A. (VEP03452C)

MESECAM PACK C.B.A. (VEP03452C)


FL851
C855
C854
T851
C853
C851
SECAM KILLER ADJ
C852
R855
R853
IC851
C856
R852
R854
R856
R851
L851
1
5
9
15
17
2
6
10
16

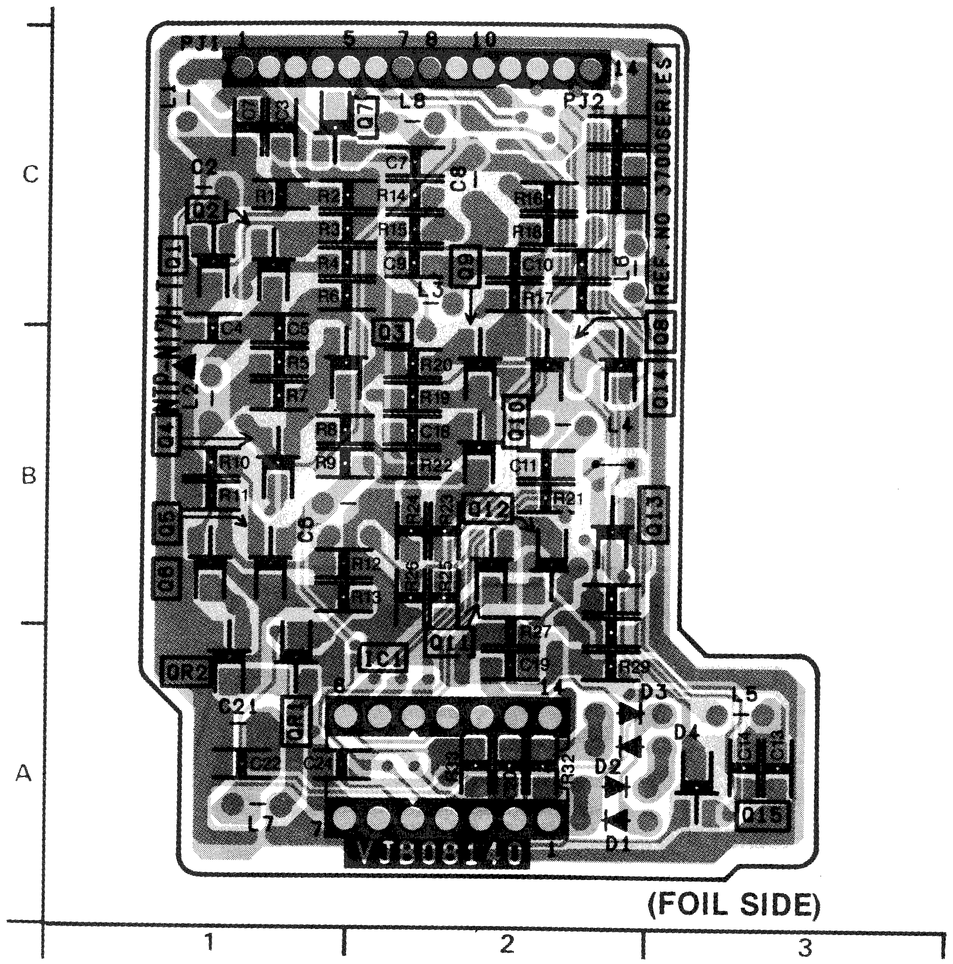
(FOIL SIDE)

LUMINANCE/CHROMINANCE PACK C.B.A. (VEP03489D)


VJB03489
MESECAM PACK
REF.NO. 800 SERIES
REF.NO. 300 SERIES
IC1
IC2
FL1
FL2
FL3
VR1
X1
PK4
PK3
PK302
PK301
QR1
QR2
QR3
QR4
QR5
QR6
Q1
Q2
Q3
Q4
DL1
DL2
D1
1
12
13
20
23
24
30
31
35
42
21
22
38
19
1
2
3
4
5
6
7

(FOIL SIDE)

S-VHS DETECTION PACK C.B.A. (VEP08140A)

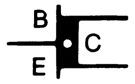

C
B
A
1
2
3
PJ1
4
5
7
8
10
14
PJ2
REF. NO. 3700SERIES
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
QR1
QR2
IC1
D1
D2
D3
D4
L1
L2
L3
L4
L5
L6
L7
L8
VJB08140

(FOIL SIDE)

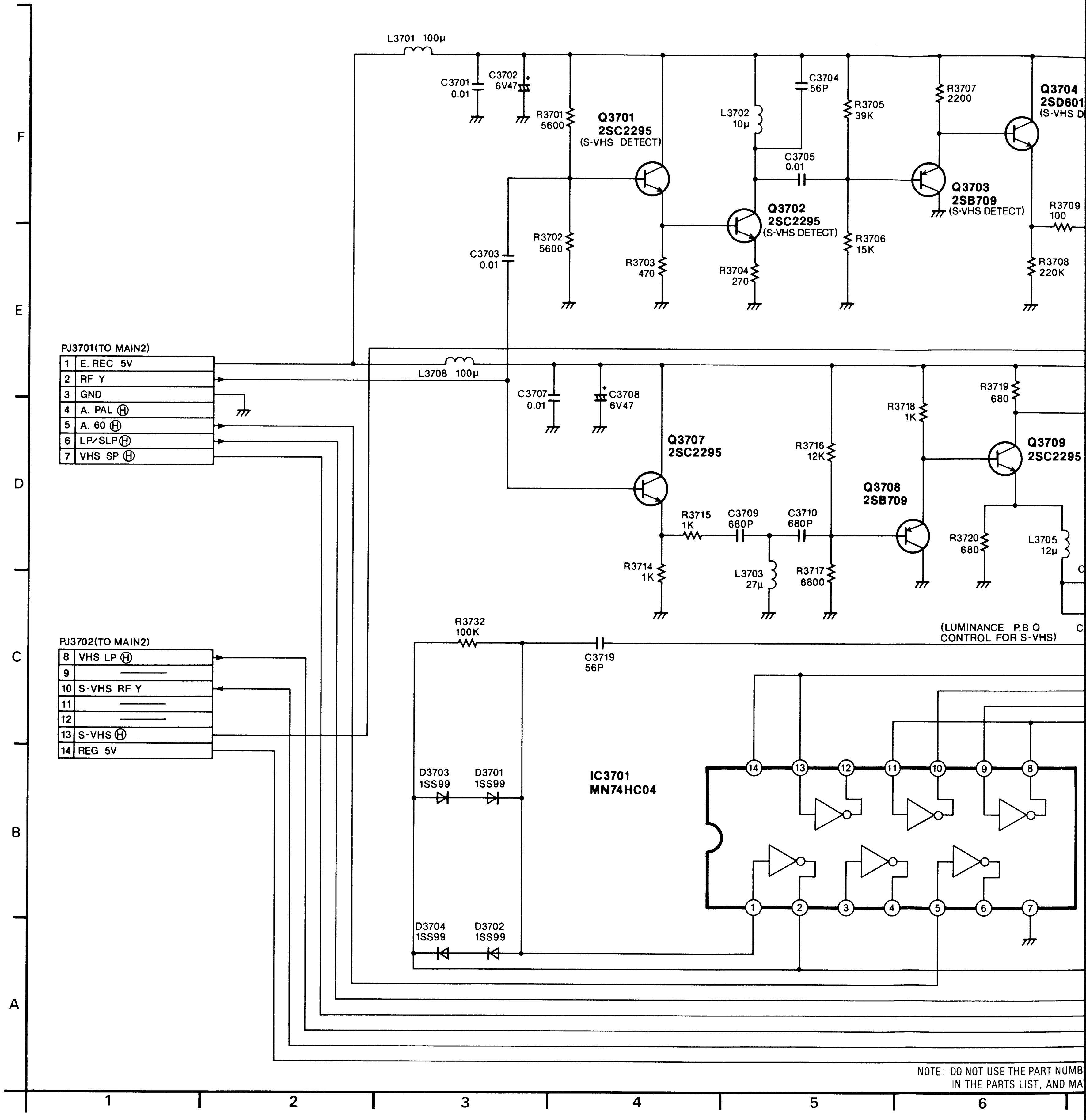
S-VHS DETECTION PACK C.B.A.	
Transistor	
Q3701	C-1
Q3702	C-1
Q3703	B-2
Q3704	B-1
Q3705	B-1
Q3706	B-1
Q3707	C-2
Q3708	C-3
Q3709	C-2
Q3710	B-2
Q3711	A-2
Q3712	B-2
Q3713	B-3
Q3714	B-3
Q3715	A-3
Transistor & Resistor	
QR3701	A-1
QR3702	A-1
Integrated Circuit	
IC3701	A-2
Connector	
PJ3701	C-1
PJ3702	C-2

ADDRESS INFORMATION

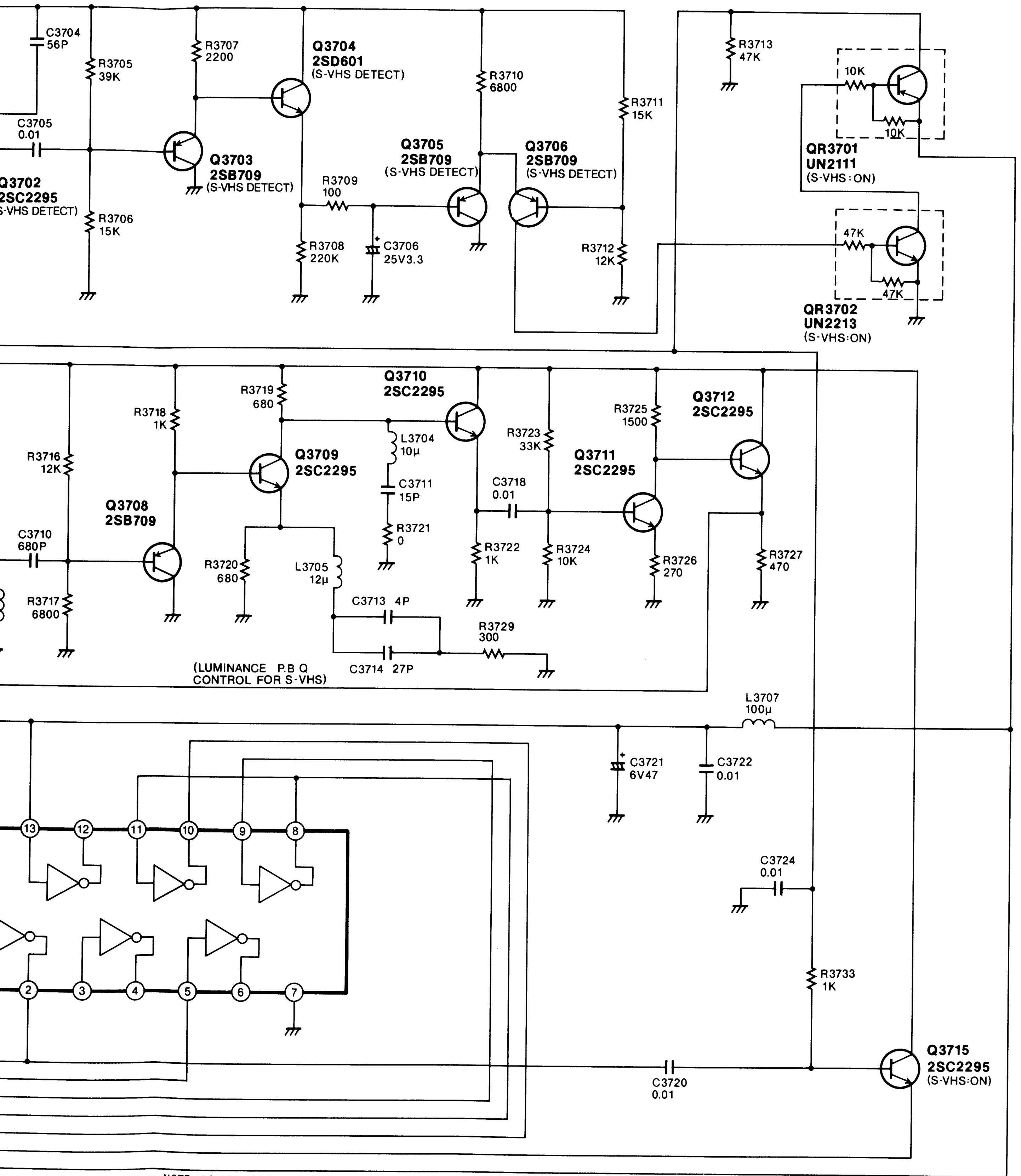
TRANSISTOR INFORMATION



S-VHS DETECTION PACK SCHEMATIC DIAGRAM


F
E
D
C
B
A
1
2
3
4
5
6
L3701 100μ
C3701 0.01
C3702 6V47
R3701 5600
Q3701 2SC2295 (S-VHS DETECT)
R3702 5600
C3703 0.01
R3703 470
L3702 10μ
C3704 56P
R3705 39K
C3705 0.01
Q3702 2SC2295 (S-VHS DETECT)
R3704 270
R3706 15K
R3707 2200
Q3703 2SB709 (S-VHS DETECT)
Q3704 2SD601 (S-VHS D
R3709 100
R3708 220K
PJ3701(TO MAIN2)
1 E. REC 5V
2 RF Y
3 GND
4 A. PAL Ⓗ
5 A. 60 Ⓗ
6 LP/SLP Ⓗ
7 VHS SP Ⓗ
L3708 100μ
C3707 0.01
C3708 6V47
Q3707 2SC2295
R3716 12K
R3718 1K
R3719 680
Q3709 2SC2295
Q3708 2SB709
R3715 1K
C3709 680P
C3710 680P
R3714 1K
L3703 27μ
R3717 6800
R3720 680
L3705 12μ
(LUMINANCE P.B Q CONTROL FOR S-VHS)
PJ3702(TO MAIN2)
8 VHS LP Ⓗ
9
10 S-VHS RF Y
11
12
13 S-VHS Ⓗ
14 REG 5V
R3732 100K
C3719 56P
D3703 1SS99
D3701 1SS99
D3704 1SS99
D3702 1SS99
IC3701 MN74HC04
14
13
12
11
10
9
8
1
2
3
4
5
6
7

NOTE: DO NOT USE THE PART NUMB
IN THE PARTS LIST, AND MA


C3704
56P
R3705
39K
R3707
2200
Q3704
2SD601
(S-VHS DETECT)
R3710
6800
R3711
15K
R3713
47K
10K
10K
QR3701
UN2111
(S-VHS : ON)
C3705
0.01
Q3703
2SB709
(S-VHS DETECT)
Q3702
2SC2295
(S-VHS DETECT)
R3706
15K
R3709
100
Q3705
2SB709
(S-VHS DETECT)
Q3706
2SB709
(S-VHS DETECT)
R3708
220K
C3706
25V3.3
R3712
12K
47K
47K
QR3702
UN2213
(S-VHS:ON)
R3719
680
Q3710
2SC2295
R3718
1K
R3725
1500
Q3712
2SC2295
L3704
10µ
R3723
33K
R3716
12K
Q3709
2SC2295
C3711
15P
Q3711
2SC2295
C3718
0.01
Q3708
2SB709
R3721
0
C3710
680P
R3722
1K
R3724
10K
R3727
470
R3720
680
L3705
12µ
R3726
270
R3717
6800
C3713 4P
R3729
300
(LUMINANCE P.B Q
CONTROL FOR S-VHS)
C3714 27P
L3707
100µ
C3721
6V47
C3722
0.01
13
12
11
10
9
8
C3724
0.01
2
3
4
5
6
7
R3733
1K
Q3715
2SC2295
(S-VHS:ON)
C3720
0.01
5
6
7
8
9
10

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

S-VHS DETECTION PACK C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3701			Q3702			Q3703			Q3704			Q3705			Q3706		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.2	0.1	0	0.2	0	0.2	0	0.1	0	0.2	0.2	0.2	0	0	0.2	0	0.1
	PAL	NTSC	PLAY		1.6	4.8	2.4	0.9	4.8	1.6	2.0	0	1.5	1.7	4.8	2.0	2.3	0	1.7	2.3	0	2.2
PAL		SECAM	REC		0	0.2	0.1	0	0.2	0	0.2	0	0.1	0	0.2	0.2	0.2	0	0	0.2	0	0.1
	SECAM	PAL	PLAY		1.6	4.8	2.4	0.9	4.8	1.6	0	0	1.5	1.7	4.8	2.0	2.3	0	1.7	2.3	0	2.2

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3707			Q3708			Q3709			Q3710			Q3711			Q3712		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.2	0.4	0.2	0	0.1	0	0.2	0.2	0	0.2	0.2	0	0.2	0.1	0	0.2	0.2
	PAL	NTSC	PLAY		1.9	4.8	2.6	2.5	0	1.8	1.7	3.1	2.5	2.4	4.8	3.1	0.4	2.8	1.1	2.1	4.8	2.8
PAL		SECAM	REC		0	0.2	0.4	0.2	0	0.1	0	0.2	0.2	0	0.2	0.2	0	0.2	0.1	0	0.2	0.2
	SECAM	PAL	PLAY		1.9	4.8	2.6	2.5	0	1.8	1.7	3.1	2.5	2.4	4.8	3.1	0.4	2.8	1.1	2.1	4.8	2.8

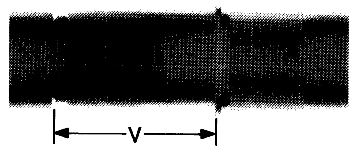
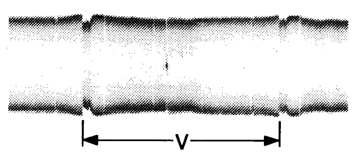
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3715																	
				PIN NO.	E	C	B															
NTSC		PAL	REC		0	0.2	0															
	PAL	NTSC	PLAY		3.2	4.8	0															
PAL		SECAM	REC		0	0.2	0															
	SECAM	PAL	PLAY		3.2	4.8	0															

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR3701			QR3702														
				PIN NO.	E	C	B	E	C	B												
NTSC		PAL	REC		4.9	0	4.9	0	4.9	0												
	PAL	NTSC	PLAY		4.9	0	4.9	0	4.9	0												
PAL		SECAM	REC		4.9	0	4.9	0	4.9	0												
	SECAM	PAL	PLAY		4.9	0	4.9	0	4.1	0												

S-VHS DETECTION PACK C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC3701																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
NTSC		PAL	REC		2.4	2.3	4.9	0	0.1	4.9	0	4.8	0	0	4.8	0	0	4.9						
	PAL	NTSC	PLAY		2.4	2.3	4.9	0	0	4.9	0	4.9	0	0	4.9	0	4.9	4.9						
PAL		SECAM	REC		2.4	2.4	4.9	0	0	4.9	0	4.8	0	0	4.8	0	4.9	4.9						
	SECAM	PAL	PLAY		2.4	2.3	4.9	0	0	4.9	0	4.9	0	0	4.9	0	4.9	4.9						

WAVEFORM OF
S-VHS DETECTION PACK PINS

PIN NO.	WAVEFORM
2	 PLAY (VHS) 0.3Vp-p
10	 PLAY (S-VHS) 1.5Vp-p

SUB CHROMA C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q8401			Q8402			Q8403			Q8404								
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B						
NTSC		PAL	REC		3.2	4.7	3.9	3.2	4.7	2.6	3.3	4.9	3.9	3.3	4.9	2.7						
	PAL	NTSC	PLAY		3.3	4.8	3.9	3.3	4.8	2.6	3.3	4.9	3.9	3.3	4.9	2.7						
PAL		SECAM	REC		3.2	4.7	3.9	3.2	4.7	2.6	3.3	4.9	3.9	3.3	4.9	2.7						
	SECAM	PAL	PLAY		3.3	4.8	3.9	3.3	4.8	2.6	3.3	4.9	3.9	3.3	4.9	2.7						

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q8501			Q8502			Q8503			Q8504			Q8505			Q8506		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.4	0	3.3	4.7	2.6	3.3	4.7	3.9	3.3	4.9	2.6	3.2	4.9	3.9	3.5	0	0.8
	PAL	NTSC	PLAY		0	0.3	0	3.3	4.8	2.6	3.3	4.7	3.9	3.3	4.0	2.7	3.3	4.9	3.9	3.5	0	2.8
PAL		SECAM	REC		0	0.4	0	3.3	4.8	2.6	3.3	4.8	3.9	3.2	4.9	2.6	3.2	4.9	3.9	3.5	0	2.8
	SECAM	PAL	PLAY		0	0.3	0	3.3	4.8	2.6	3.3	4.8	3.9	3.3	4.9	2.7	3.3	4.9	3.9	3.5	0	2.8

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q8601			Q8602			Q8603			Q8604			Q8606			Q8607		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.7	4.8	2.4	2.4	4.7	3.0	4.9	4.8	4.1	1.6	4.8	2.3	3.3	4.8	4.0	3.3	4.8	2.6
	PAL	NTSC	PLAY		1.6	4.9	2.4	0	0.4	0	4.9	0.4	4.9	1.6	4.9	2.3	3.4	4.9	0.1	3.3	4.9	2.6
PAL		SECAM	REC		1.7	4.8	2.4	2.4	4.7	3.0	4.9	4.8	4.1	1.6	4.8	2.3	2.0	4.9	0	2.0	4.9	2.6
	SECAM	PAL	PLAY		1.7	4.9	2.4	0	0.5	0	4.9	0.5	4.9	1.6	4.9	2.3	2.0	4.9	0	2.0	4.9	2.6

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q8608			Q8609			Q8610			Q8611								
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B						
NTSC		PAL	REC		0.6	4.8	0.4	4.8	4.5	4.1	3.3	4.8	3.9	3,3	4.8	2.6						
	PAL	NTSC	PLAY		0.5	4.8	0.3	4.8	4.6	4.1	3.3	4.9	3.9	3.3	4.9	2.6						
PAL		SECAM	REC		0.6	4.8	0.3	4.8	4.5	4.1	1.9	4.8	0	1.9	4.8	2.5						
	SECAM	PAL	PLAY		0.6	2.2	0.3	4.8	4.6	4.2	1.9	4.9	0	1.9	4.9	2.5						

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR8401			QR8501			QR8502			QR8601			QR8602					
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
NTSC		PAL	REC		4.9	4.9	0.7	4.8	4.8	0	4.9	4.9	0.7	0	0.1	5.0	4.9	4.9	0			
	PAL	NTSC	PLAY		4.9	4.9	0.8	4.9	4.8	0	4.9	4.9	0.8	0	4.9	0	4.9	4.9	0			
PAL		SECAM	REC		4.9	4.9	0.7	4.8	4.8	0	4.9	4.9	0.8	0	0.1	5.0	4.9	0.1	0			
	SECAM	PAL	PLAY		4.9	4.9	0.8	4.9	4.8	0	4.9	4.9	0.8	0	4.9	0	4.9	0	4.9			

SUB CHROMA C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8401																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0	0	0	3.1	0	5.0	2.6	4.7	0	2.2	0	0	0	0	0	4.2	0	3.1	0	3.3
	PAL	NTSC	PLAY		0	0	0	3.5	0	5.0	2.6	4.8	0	2.7	0	0	2.3	0	2.3	4.2	0	3.3	0	3.3
PAL		SECAM	REC		0	0	0	3.1	0	5.0	2.6	4.7	0	2.2	0	0	0	0	0	4.2	0	3.1	0	3.3
	SECAM	PAL	PLAY		0	0	0	3.1	0	5.0	2.6	4.8	0	2.6	0	0	2.3	0	0	4.2	0	3.0	0	3.3

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8401																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
NTSC		PAL	REC		2.4	0	2.6	3.3	3.3	3.3	3.7	3.3	3.0	4.8	3.5	0.3	2.3	0.4	0	0	0.3	3.3		
	PAL	NTSC	PLAY		2.4	0	2.6	2.6	3.3	3.3	3.7	3.3	3.3	4.9	3.6	0.3	2.3	0	0	0	4.8	2.5		
PAL		SECAM	REC		0	0	2.6	3.3	3.3	3.3	3.6	3.3	3.0	4.8	3.5	0.3	0	0.4	0	0	0.3	3.3		
	SECAM	PAL	PLAY		2.4	0	2.6	2.6	3.3	3.3	3.7	3.3	3.3	4.9	3.6	0.3	2.3	0.4	0	0	4.8	3.3		

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8501																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0	0	0	3.1	0	2.8	2.6	4.7	0	2.2	0	0	0	0	0	4.2	0	3.1	0	3.3
	PAL	NTSC	PLAY		0	0	0	3.1	0	3.0	2.6	4.8	0	2.6	0	0	2.3	0	0	4.2	0	3.3	0	3.3
PAL		SECAM	REC		0	0	0	3.1	0	3.3	2.7	5.0	0	2.2	0	0	0	0	0	4.2	0	3.1	0	3.2
	SECAM	PAL	PLAY		0	0	0	3.1	0	2.8	2.6	4.8	0	2.6	0	0	2.3	0	0	4.2	0	3.2	0	3.3

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8501																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
NTSC		PAL	REC		0	0	2.6	3.3	3.3	3.3	3.7	3.3	3.0	4.8	0.1	0.3	2.3	0.4	0	0	0.3	3.3		
	PAL	NTSC	PLAY		0	0	2.6	2.6	3.3	3.3	3.7	3.3	3.3	4.9	3.6	0.3	2.3	0.4	0	0	4.8	3.3		
PAL		SECAM	REC		0	0	2.6	3.3	3.3	3.3	3.7	3.3	3.0	4.8	3.5	0.4	2.3	0.4	0	0	0.3	3.3		
	SECAM	PAL	PLAY		0	0	2.6	2.6	3.3	3.3	3.7	3.3	3.3	4.9	3.6	0.3	2.3	0.4	0	0	4.8	3.3		

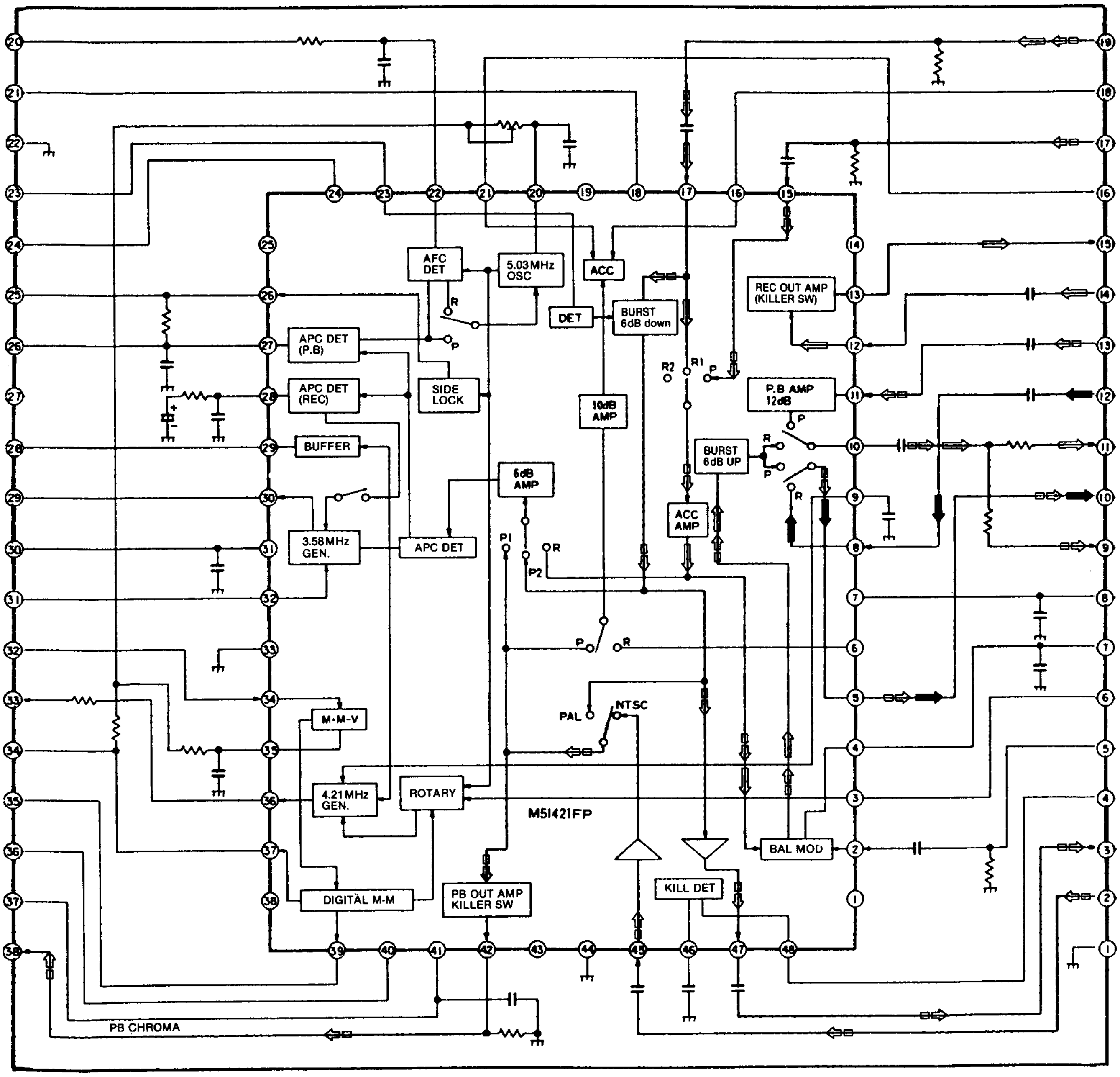
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8601																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		2.8	0.8	4.7	1.9	1.1	3.7	1.6	2.3	1.7	0	0	0	0	0.2	0.2	0	0	0.2	0	1.1
	PAL	NTSC	PLAY		2.2	0	0.5	0	1.2	0.5	0.1	2.2	1.4	1.7	2.8	0	1.4	2.8	4.8	2.4	2.8	2.0	0	1.3
PAL		SECAM	REC		2.8	3.0	4.7	1.9	1.1	3.7	1.6	2.3	1.7	0	0	0	0	0.2	0.2	0	0	0.2	0	1.1
	SECAM	PAL	PLAY		2.2	0	0.4	0.1	1.2	0.4	0.1	2.3	1.4	1.7	2.8	0	1.4	2.8	4.8	2.4	2.0	2.0	0	1.3

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8601																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30										
NTSC		PAL	REC		1.2	0.6	0.4	0.4	3.3	4.8	3.0	3.0	0	2.4										
	PAL	NTSC	PLAY		1.4	0.6	0.3	0.4	3.3	4.9	3.0	3.0	0	0										
PAL		SECAM	REC		1.2	0.6	0.4	0.4	3.4	4.8	3.0	3.0	0	2.4										
	SECAM	PAL	PLAY		1.5	0.6	0.3	0.4	3.3	4.9	3.0	3.0	0	0										

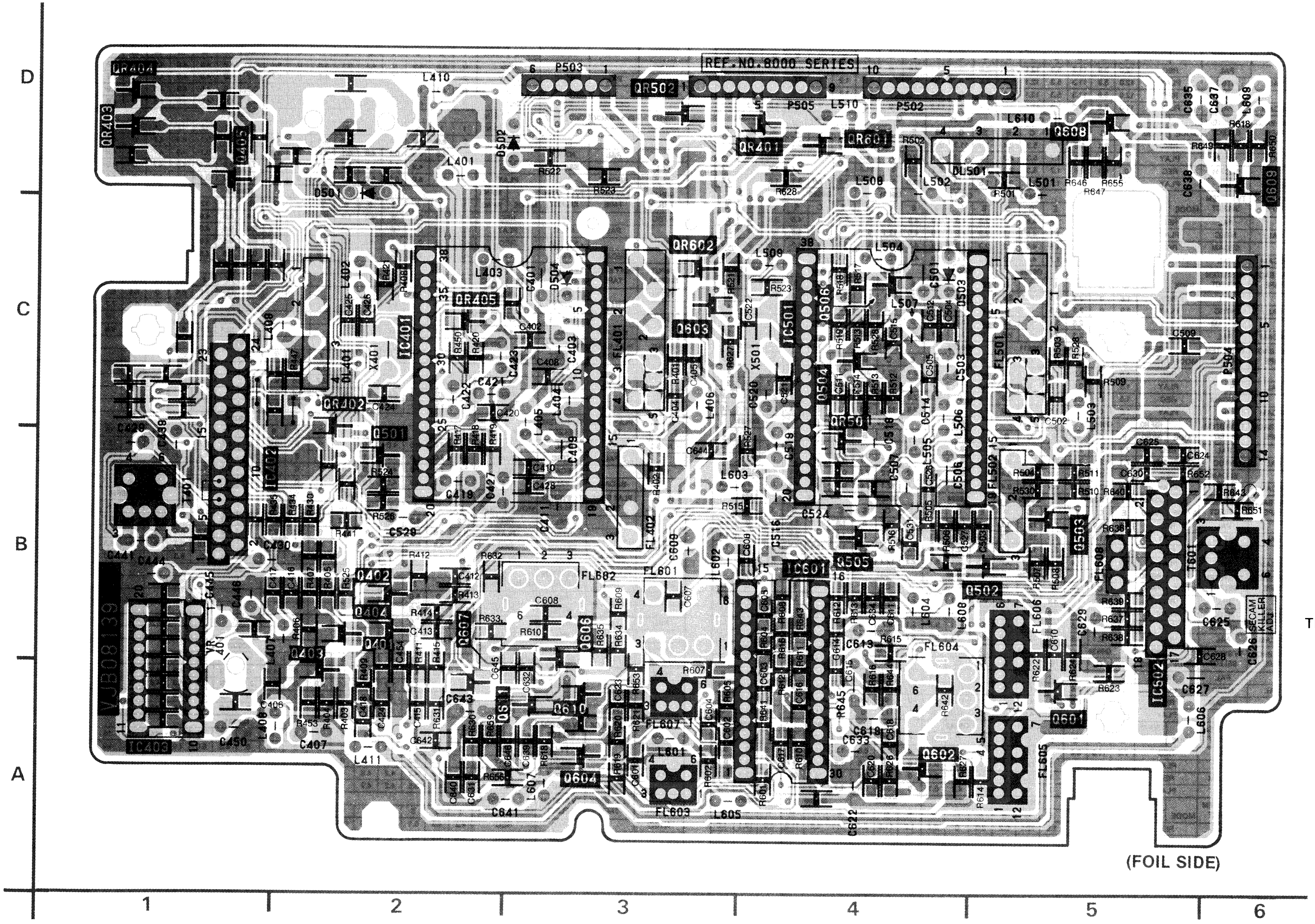
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC8602																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
NTSC		PAL	REC		0	0	0	3.5	4.5	0	4.3	0	3.0	0	3.4	3.8	3.4	3.8	0	4.2	4.9	4.9		
	PAL	NTSC	PLAY		3.5	0.4	0	3.5	4.5	0	4.3	0	3.0	0	3.6	0.1	3.6	0.1	0	0	4.9	4.9		
PAL		SECAM	REC		3.5	1.1	0	3.5	4.5	0	4.3	0	3.0	0	3.4	4.1	3.4	4.0	0	4.1	4.9	4.9		
	SECAM	PAL	PLAY		3.5	0	0	0	4.5	0	4.4	0	3.0	0	3.4	4.1	3.4	4.1	0	4.2	4.9	4.9		

IC8401, IC8501 VEFH04E

⬅ VIDEO MAIN SIGNAL PATH IN REC MODE
⇦ CHROMINANCE MAIN SIGNAL PATH IN REC MODE
⇦□ CHROMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE


AFC DET
5.03MHz OSC
ACC
DET
BURST 6dB down
REC OUT AMP (KILLER SW)
APC DET (P.B)
APC DET (REC)
SIDE LOCK
10dB AMP
P.B AMP 12dB
BUFFER
BURST 6dB UP
6dB AMP
ACC AMP
3.58MHz GEN.
APC DET
P1
P2
R
P
R1
R2
M·M·V
PAL
NTSC
4.21MHz GEN.
ROTARY
M51421FP
BAL MOD
KILL DET
DIGITAL M-M
PB OUT AMP KILLER SW
PB CHROMA

SUB CHROMA C.B.A. (VEP08139A)

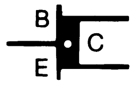


D
C
B
A
1
2
3
4
5
6
REF. NO. 8000 SERIES
P503
P505
P502
P504
QR404
QR403
QR401
QR402
QR405
QR501
QR502
QR601
QR602
IC401
IC402
IC403
IC501
IC502
IC601
FL401
FL402
FL501
FL502
FL601
FL602
FL603
FL604
FL605
FL606
FL607
FL608
X401
X501
T401
T601
VR 401
DL501
SECAM KILLER ADJ
VJB08139
(FOIL SIDE)

SUB CHROMA C.B.A.	
Transistor	
Q8401	B-2
Q8402	B-2
Q8403	B-2
Q8404	B-2
Q8405	D-1
Q8501	B-2
Q8502	B-5
Q8503	B-5
Q8504	C-4
Q8505	B-4
Q8506	C-4
Q8601	A-5
Q8602	A-4
Q8603	C-3
Q8604	A-3
Q8606	B-3
Q8607	B-2
Q8608	D-5
Q8609	D-6
Q8610	A-3
Q8611	A-3
Transistor & Resistor	
QR8401	D-4
QR8402	C-2
QR8403	D-1
QR8404	D-1
QR8405	C-2
QR8501	C-4
QR8502	D-3
QR8601	D-4
QR8602	C-3
Integrated Circuit	
IC8401	C-2
IC8402	B-2
IC8403	A-1
IC8501	C-4
IC8601	B-4
IC8602	A-5
Adjustment	
VR8401	B-1
Connector	
P8502	D-4
P8503	D-3
P8504	C-6
P8505	D-4

ADDRESS INFORMATION

TRANSISTOR INFORMATION



SUB CHROMA SCHEMATIC DIAGRAM

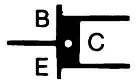
◀ VIDEO MAIN SIGNAL PATH IN REC MODE

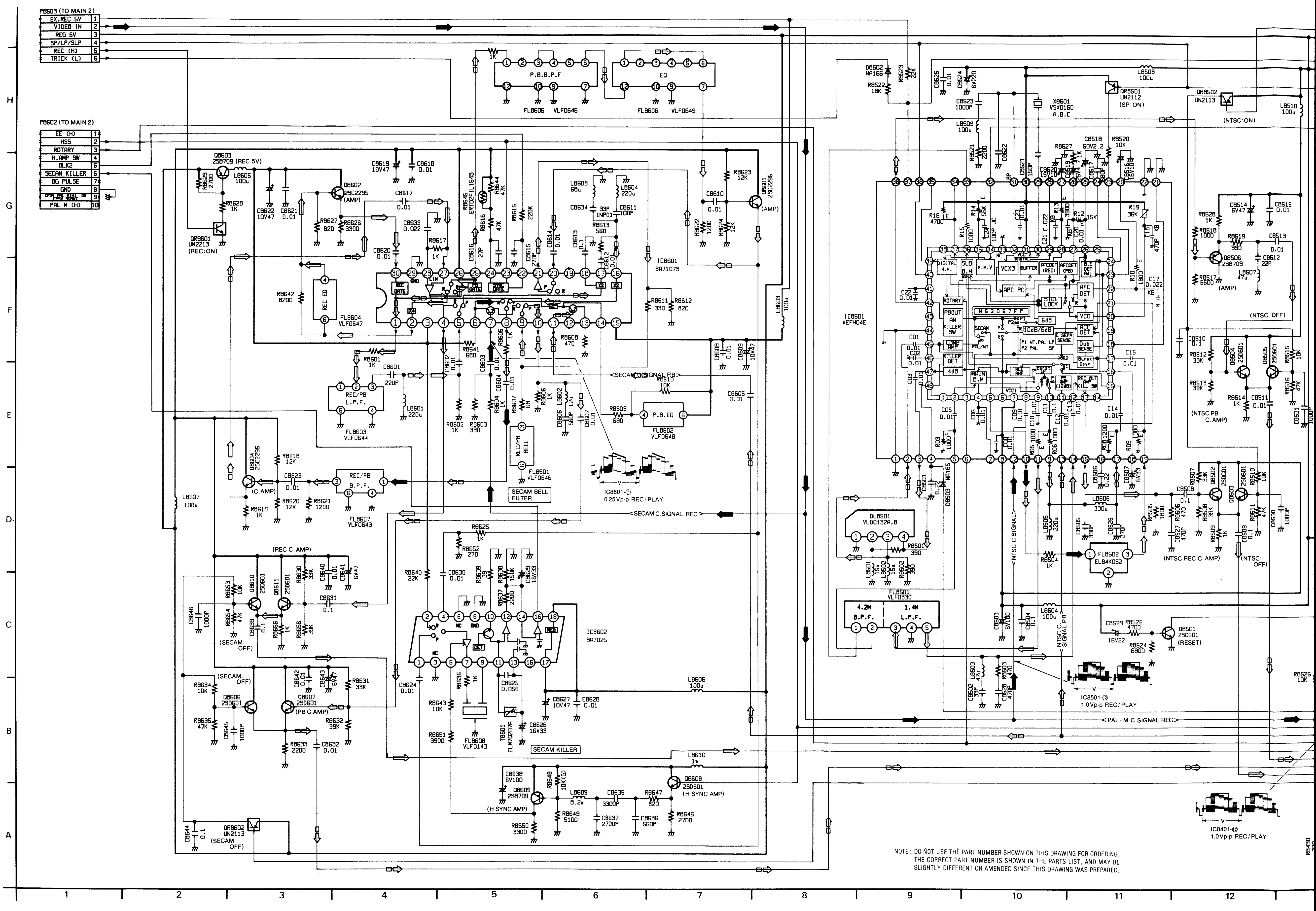
◁ CHROMINANCE MAIN SIGNAL PATH IN REC MODE

SUB CHROMA C.B.A.	
Transistor	
Q8401	B-2
Q8402	B-2
Q8403	B-2
Q8404	B-2
Q8405	D-1
Q8501	B-2
Q8502	B-5
Q8503	B-5
Q8504	C-4
Q8505	B-4
Q8506	C-4
Q8601	A-5
Q8602	A-4
Q8603	C-3
Q8604	A-3
Q8606	B-3
Q8607	B-2
Q8608	D-5
Q8609	D-6
Q8610	A-3
Q8611	A-3
Transistor & Resistor	
QR8401	D-4
QR8402	C-2
QR8403	D-1
QR8404	D-1
QR8405	C-2
QR8501	C-4
QR8502	D-3
QR8601	D-4
QR8602	C-3
Integrated Circuit	
IC8401	C-2
IC8402	B-2
IC8403	A-1
IC8501	C-4
IC8601	B-4
IC8602	A-5
Adjustment	
VR8401	B-1
Connector	
P8502	D-4
P8503	D-3
P8504	C-6
P8505	D-4

ADDRESS INFORMATION

TRANSISTOR INFORMATION




P8503 (TO MAIN 2)
EX.REC 5V
VIDEO IN
REG 5V
SP/LP/SLP
REC (H)
TRICK (L)
P8502 (TO MAIN 2)
EE (H)
HSS
ROTARY
H.AMP SW
BLK2
SECAM KILLER
BG PULSE
GND
PAL M (H)
P.B.B.P.F
EQ
FL8605 VLF0645
FL8606 VLF0649
IC8601 BA7107S
REC/PB L.P.F.
FL8603 VLF0644
REC/PB B.P.F.
FL8607 VLF0643
REC/PB BELL
FL8601 VLF0646
SECAM BELL FILTER
P.B.EQ
FL8602 VLF0648
<SECAM C.SIGNAL PB>
<SECAM C.SIGNAL REC>
IC8601-⑦ 0.25Vp-p REC/PLAY
IC8602 BA7025
SECAM KILLER
(REC C.AMP)
(H SYNC AMP)
IC8501 VEFH04E
M52057FP
DL8501 VL00132A,B
FL8501 VLF0330
4.2M B.P.F.
1.4M L.P.F.
FL8502 ELB4K052
<PAL-M C SIGNAL REC>
<NTSC C SIGNAL>
NTSC C SIGNAL PB
IC8501-⑯ 1.0Vp-p REC/PLAY
IC8401-⑫ 1.0Vp-p REC/PLAY
(NTSC:ON)
(NTSC:OFF)
(NTSC REC C.AMP)
(NTSC PB C.AMP)
(RESET)
(SP:ON)
(REC:ON)
(SECAM:OFF)
1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H

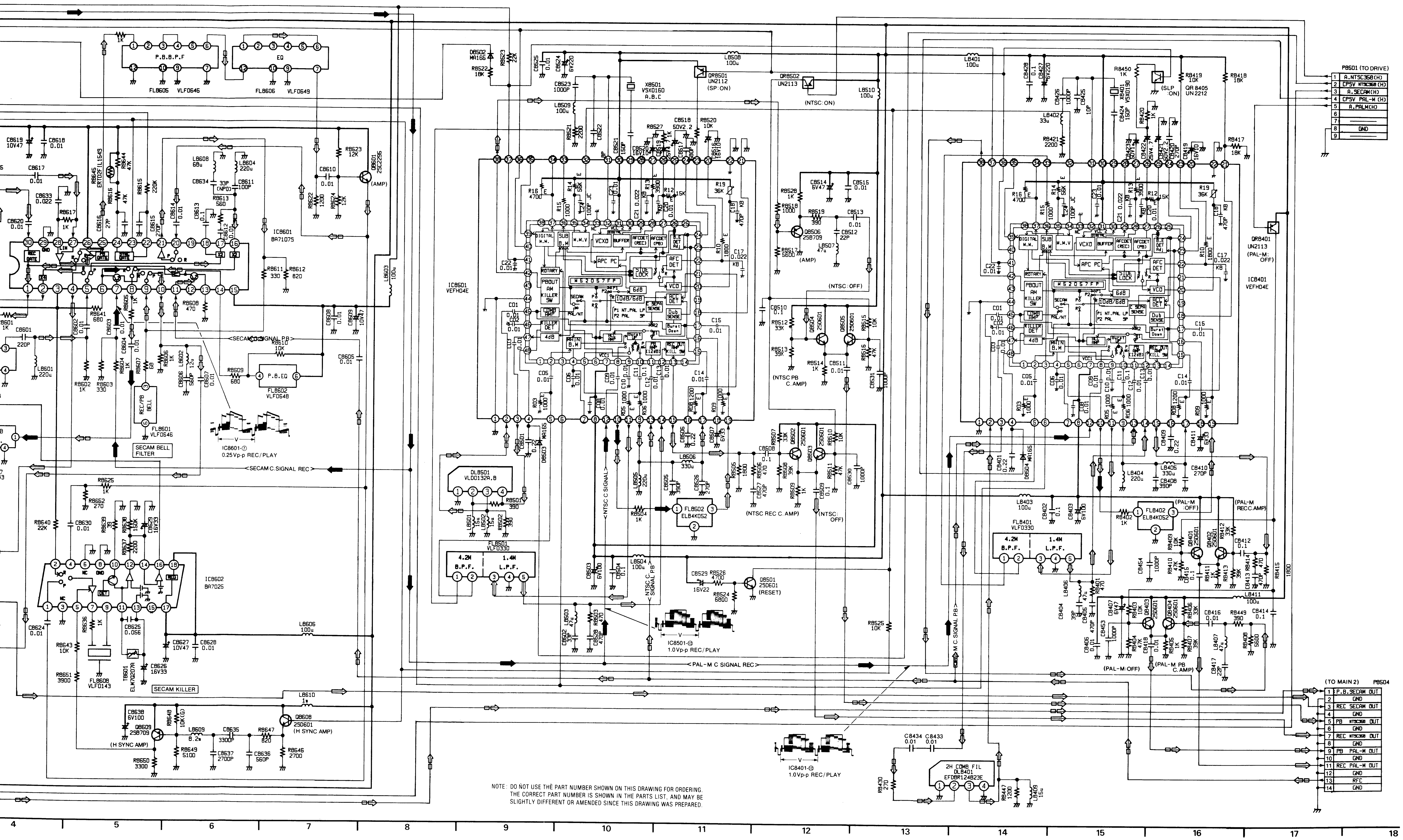
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

GRAM

VIDEO MAIN SIGNAL PATH IN REC MODE

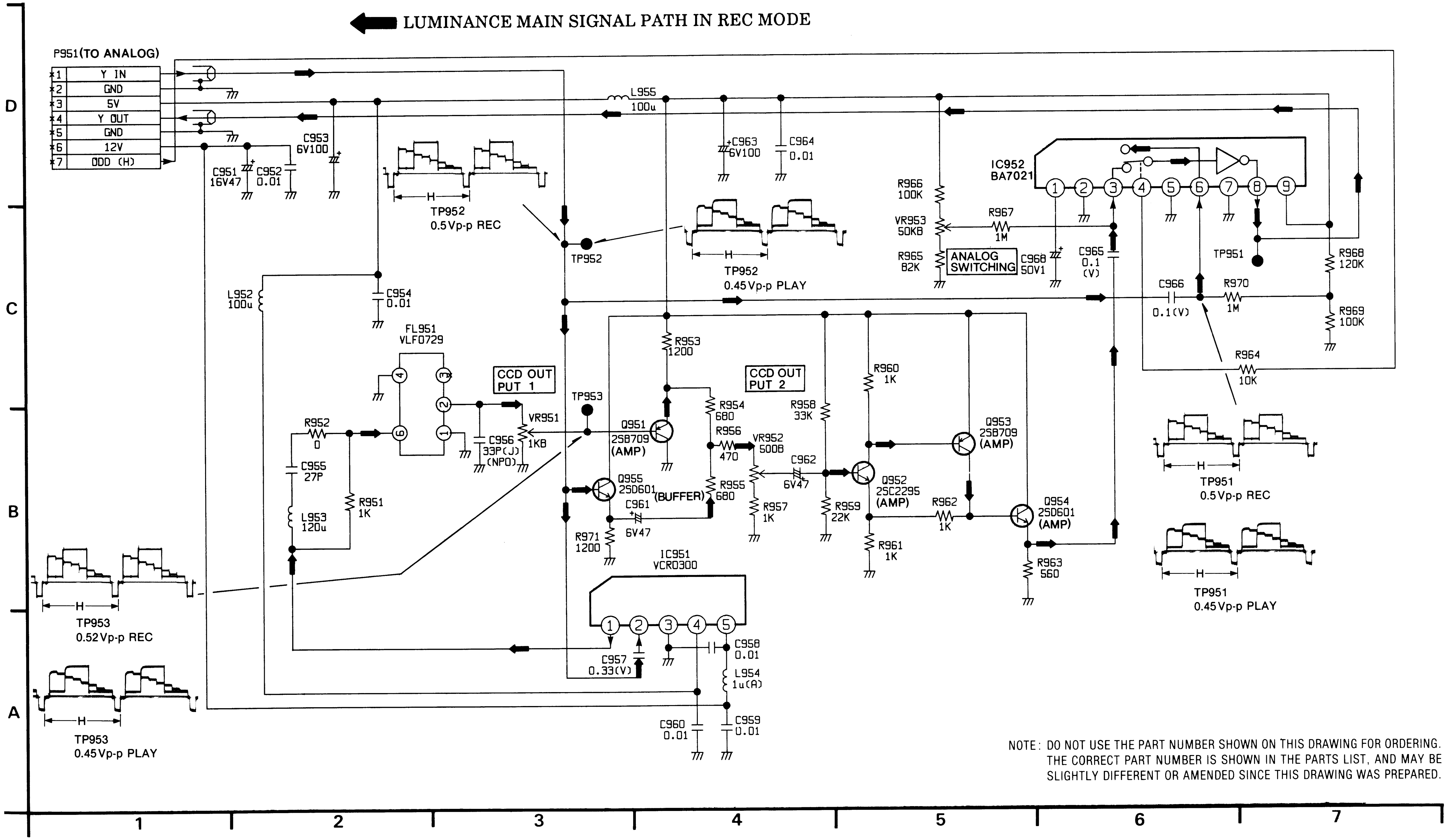
CHROMINANCE MAIN SIGNAL PATH IN REC MODE

CHROMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE


P.B.B.P.F
FL8605 VLF0646
EQ
FL8606 VLF0649
IC8601 BA71075
Q8601 2SC2295 (AMP)
SECAM C.SIGNAL PB
P.B.EQ
FL8602 VLF0648
REC/PB BELL
FL8601 VLF0646
SECAM BELL FILTER
IC8601-⑦ 0.25Vp-p REC/PLAY
SECAM C.SIGNAL REC
IC8602 BA7025
SECAM KILLER
FL8608 VLF0143
T8601 ELM70207A
Q8609 2SB709 (H SYNC AMP)
Q8608 2SD601 (H SYNC AMP)
D8502 MA165
X8501 VSX0160 A.B.C
QR8501 UN2112 (SP:ON)
QR8502 UN2113 (NTSC:ON)
IC8501 VEFH04E
M52057FP
DIGITAL M.M.
SUB B.M
M.M.V
VCXO
BUFFER
AFCDET (REC)
AFCDET (PB)
B.E DET
APC PC
SIDE LOCK
AFC DET
VCO
ACC DET
ROTARY
PBOUT AM KILLER SW
COMB AMP
KILLER DET
4dB
6dB
10dB/6dB
C SEPA SENSE
Dub SENSE
Burst Down
MAIN B.M
Q8506 2SB709 (AMP)
(NTSC:OFF)
(NTSC PB C.AMP)
Q8504 2SD601
Q8505 2SD601
DL8501 VLD0132A.B
FL8501 VLF0330
4.2M B.P.F.
1.4M L.P.F.
FL8502 ELB4K052
NTSC C SIGNAL
NTSC C. SIGNAL PB
(NTSC REC C.AMP)
Q8502 2SD601
Q8503 2SD601
Q8501 2SD601 (RESET)
IC8501-⑪ 1.0Vp-p REC/PLAY
PAL-M C SIGNAL REC
PAL-M C SIGNAL PB
IC8401-⑪ 1.0Vp-p REC/PLAY
2H COMB FIL DL8401 EFDBR124B23E
X8401 VSX0190
QR8405 UN2212 (SLP:ON)
IC8401 VEFH04E
QR8401 UN2113 (PAL-M:OFF)
FL8401 VLF0330
FL8402 ELB4K052
(PAL-M:OFF)
(PAL-M REC C.AMP)
Q8401 2SD601
Q8402 2SD601
Q8403 2SD601
Q8404 2SD601
(PAL-M PB C.AMP)
D8403 MA165
P8501 (TO DRIVE)
1 A.NTSC358(H)
2 CPSV NTSC358 (H)
3 A.SECAM(H)
4 CPSV PAL-M (H)
5 A.PALM(H)
6
7 ———
8 GND
9 ———
(TO MAIN 2) P8504
1 P.B.SECAM OUT
2 GND
3 REC SECAM OUT
4 GND
5 PB NTSC358 OUT
6 GND
7 REC NTSC358 OUT
8 GND
9 PB PAL-M OUT
10 GND
11 REC PAL-M OUT
12 GND
13 RFC
14 GND
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

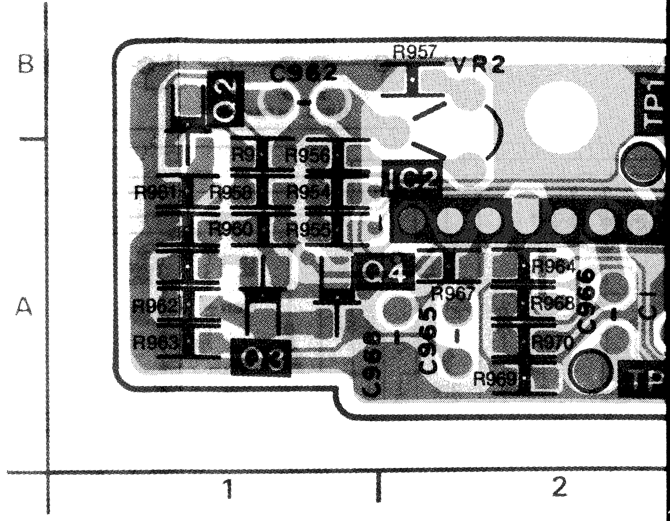
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

SUB ANALOGUE (2) SCHEMATIC DIAGRAM


LUMINANCE MAIN SIGNAL PATH IN REC MODE
D
C
B
A
P951(TO ANALOG)
*1 Y IN
*2 GND
*3 5V
*4 Y OUT
*5 GND
*6 12V
*7 ODD (H)
C951 16V47
C952 0.01
C953 6V100
L952 100u
C954 0.01
FL951 VLF0729
CCD OUT PUT 1
VR951 1KB
C956 33P(J) (NPO)
R952 0
C955 27P
L953 120u
R951 1K
TP952 0.5Vp-p REC
TP952
TP952 0.45Vp-p PLAY
H
L955 100u
C963 6V100
C964 0.01
TP953
Q951 2SB709 (AMP)
Q955 2SD601 (BUFFER)
C961 6V47
R971 1200
R953 1200
R954 680
R956 470
VR952 500B
R955 680
R957 1K
CCD OUT PUT 2
C962 6V47
R958 33K
R959 22K
R960 1K
R961 1K
Q952 2SC2295 (AMP)
Q953 2SB709 (AMP)
R962 1K
Q954 2SD601 (AMP)
R963 560
IC951 VCR0300
C957 0.33(V)
C958 0.01
L954 1u(A)
C960 0.01
C959 0.01
IC952 BA7021
R966 100K
VR953 50KB
R965 82K
ANALOG SWITCHING
R967 1M
C968 50V1
C965 0.1 (V)
C966 0.1(V)
R970 1M
TP951
R968 120K
R969 100K
R964 10K
TP951 0.5Vp-p REC
TP951 0.45Vp-p PLAY
TP953 0.52Vp-p REC
TP953 0.45Vp-p PLAY
1
2
3
4
5
6
7

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

SUB ANALOGUE (2) C.B.A. (V


B
A
1
2
R957
VR2
C962
Q2
TP1
IC2
Q4
Q3
R964
R967
R968
R970
R969
C965
C966

SUB ANALOGUE (2) C.B.A.	
Transistor	
Q951	A-5
Q952	B-1
Q953	A-1
Q954	A-2
Integrated Circuit	
IC951	A-4
IC952	A-2
Test Point	
TP951	B-2
TP952	A-2
TP953	A-5
Adjustment	
VR951	A-5
VR952	B-2
VR953	A-3
Connector	
P951	A-3

ADDRESS INFORMATION

TRANSIST

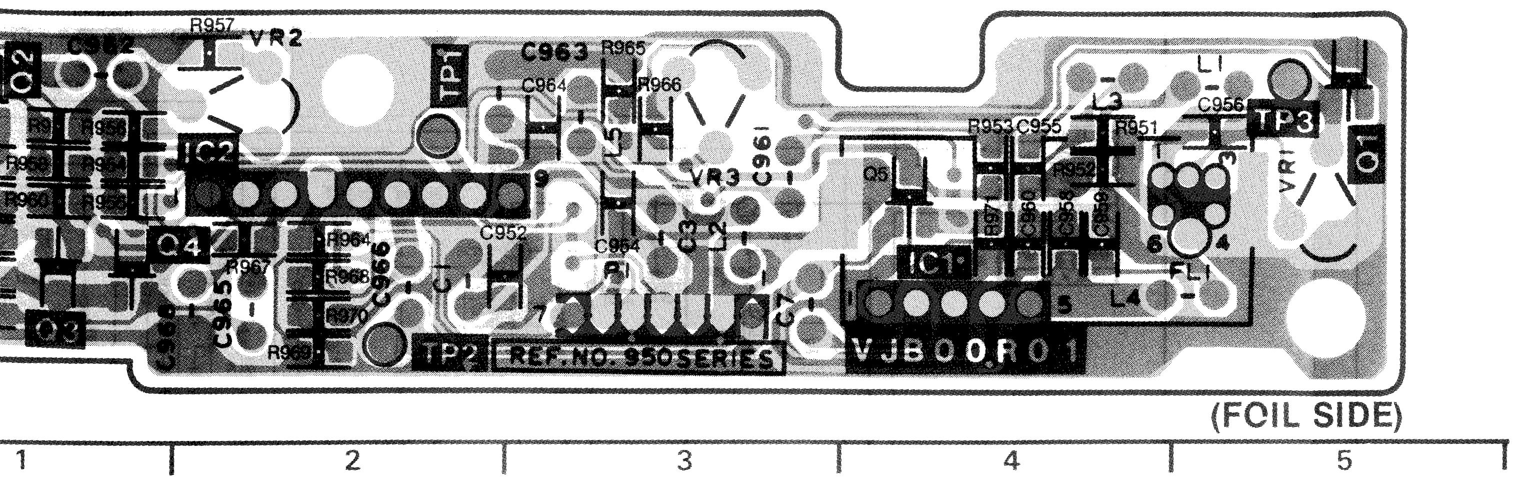
SUB ANALOGUE (2) C.B.A. T

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	
				PIN NO.	E
NTSC		PAL	REC		1.6
	PAL	NTSC	PLAY		1.6
PAL		SECAM	REC		1.6
	SECAM	PAL	PLAY		1.6

SUB ANALOGUE (2) C.B.A. I

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	
				PIN NO.	1
NTSC		PAL	REC		2.7
	PAL	NTSC	PLAY		2.7
PAL		SECAM	REC		2.7
	SECAM	PAL	PLAY		2.7

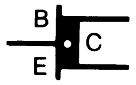
ALOGUE (2) C.B.A. (VEP00R01A)



SUB ANALOGUE (2) C.B.A.	
Transistor	
Q951	A-5
Q952	B-1
Q953	A-1
Q954	A-2
Integrated Circuit	
IC951	A-4
IC952	A-2
Test Point	
TP951	B-2
TP952	A-2
TP953	A-5
Adjustment	
VR951	A-5
VR952	B-2
VR953	A-3
Connector	
P951	A-3

ADDRESS INFORMATION

TRANSISTOR INFORMATION



SUB ANALOGUE (2) C.B.A. TRANSISTOR DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q951			Q952			Q953			Q954			Q955					
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
NTSC		PAL	REC		1.6	0	0.9	1.2	4.3	1.9	4.9	1.8	4.3	1.1	4.9	1.7	2.9	4.9	3.6			
	PAL	NTSC	PLAY		1.6	0	0.9	1.2	4.3	1.9	4.9	1.8	4.3	1.1	4.9	1.8	2.9	4.8	3.6			
PAL		SECAM	REC		1.6	0	0.9	1.2	2.8	1.9	4.9	1.8	4.3	1.1	4.9	0.3	2.9	4.9	3.6			
	SECAM	PAL	PLAY		1.6	0	0.9	1.2	4.3	1.9	4.9	1.7	4.3	1.1	4.9	1.7	2.9	4.9	3.6			

SUB ANALOGUE (2) C.B.A. ICs DC VOLTAGE CHART

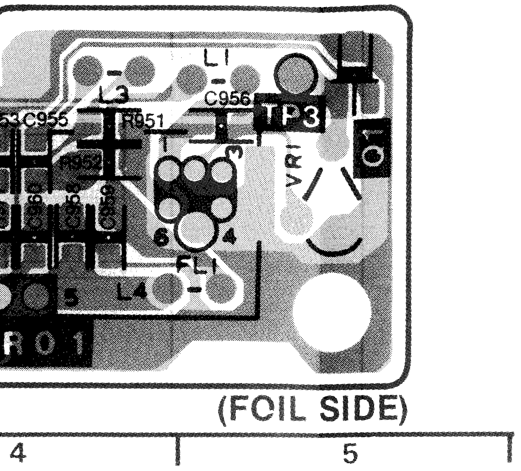
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC951										IC952									
				PIN NO.	1	2	3	4	5						1	2	3	4	5	6	7	8	9	
NTSC		PAL	REC		2.7	2.3	0	4.8	12.1						2.3	0	2.4	0.2	0	2.4	0	1.1	4.9	
	PAL	NTSC	PLAY		2.7	2.3	0	4.9	12.1						2.3	0	2.4	0	0	2.4	0	1.1	4.9	
PAL		SECAM	REC		2.7	2.3	0	4.9	12.1						2.3	0	2.4	0	0	2.4	0	1.1	4.9	
	SECAM	PAL	PLAY		2.7	2.3	0	4.9	12.2						2.3	0	2.4	0	0	2.4	0	1.1	4.9	

ANALOGUE C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9301			Q9302			Q9303			Q9304			Q9305			Q9306		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	4.9	0	0	4.9	0	0	0	0.7	0	4.9	0	2.3	4.9	2.7	3.7	11.2	4.3
	PAL	NTSC	PLAY		0	4.9	0.1	0	4.9	0	0	4.9	0.1	0	0	0.7	2.3	4.9	2.7	3.7	11.3	4.3
PAL		SECAM	REC		0	4.9	0.1	0	4.9	0	0	4.9	0.1	0	4.9	0	2.3	4.9	2.7	3.7	11.2	4.3
	SECAM	PAL	PLAY		0	4.9	0	0	4.9	0	0	0	0.7	0	4.9	0	2.3	4.9	2.7	3.7	11.3	4.3
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9307			Q9308			Q9309			Q9310			Q9401			Q9402		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		12.0	5.9	11.3	5.3	12.1	5.9	2.4	0	11.3	2.4	0	1.8	1.2	0	0.6	4.8	4.6	4.2
	PAL	NTSC	PLAY		12.0	5.9	11.3	5.3	12.1	5.9	2.4	0	11.3	2.4	0	1.8	1.2	0	0.6	4.8	4.6	4.2
PAL		SECAM	REC		12.0	5.9	11.3	5.3	12.1	5.9	2.7	0	11.6	2.7	0	2.1	1.2	0	0.6	4.8	4.6	4.2
	SECAM	PAL	PLAY		12.0	5.9	11.3	5.3	12.1	5.9	2.4	0	11.3	2.4	0	1.8	1.2	0	0.6	4.8	4.6	4.2
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9403			Q9404			Q9405			Q9406			Q9407			Q9408		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.1	0.6	1.7	5.3	2.4	1.5	11.3	2.1	12.0	5.1	11.4	4.5	12.0	5.1	1.6	7.6	2.2
	PAL	NTSC	PLAY		0	0.1	0.6	1.7	5.3	2.3	1.5	11.3	2.1	12.0	5.1	11.3	4.5	12.0	5.1	1.6	7.6	2.2
PAL		SECAM	REC		0	0.1	0.6	1.7	5.3	2.3	1.5	11.4	2.1	12.0	5.1	11.4	4.5	12.0	5.1	1.6	7.6	2.2
	SECAM	PAL	PLAY		0	0	0.6	1.7	5.4	2.3	1.5	11.4	2.1	12.0	5.1	11.3	4.5	12.0	5.1	1.5	7.6	2.2
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9409			Q9410			Q9411			Q9501			Q9502			Q9503		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		8.7	12.0	9.4	1.8	4.8	2.2	2.3	4.8	2.9	4.5	12.1	5.1	5.1	0	4.5	3.6	0	2.9
	PAL	NTSC	PLAY		8.7	12.0	9.4	1.8	4.8	2.2	2.3	4.8	2.9	4.5	12.1	5.1	5.1	0	4.5	3.6	0	2.9
PAL		SECAM	REC		8.7	12.0	9.3	1.8	4.8	2.2	2.3	4.8	2.9	4.5	12.1	5.1	5.1	0	4.5	3.6	0	2.9
	SECAM	PAL	PLAY		8.7	12.0	9.3	1.7	4.8	2.2	2.3	4.8	2.9	4.5	12.1	5.1	5.1	0	4.5	3.6	0	2.9
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9504			Q9505			Q9506			Q9507			Q9508			Q9509		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.8	0	2.3	3.5	0	2.8	0	3.3	0.1	0	0.3	0.6	2.2	0	1.5	2.2	0	1.5
	PAL	NTSC	PLAY		2.9	0	2.3	3.5	0	0	0	3.3	0.1	0	0.3	0.6	2.2	0	1.5	2.2	0	1.5
PAL		SECAM	REC		2.9	0	2.3	3.4	0	2.8	0	3.3	0.1	0	0.3	0.6	2.2	0	1.5	2.2	0	1.5
	SECAM	PAL	PLAY		2.9	0	2.3	3.4	0	2.8	0	3.3	0.1	0	0.3	0.6	2.2	0	1.5	2.2	0	1.5
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9510			Q9511			Q9512			Q9513			Q9514			Q9515		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.5	0	0.9	1.5	0	0.9	5.5	0	4.9	2.7	12.1	3.3	6.7	12.0	7.4	2.2	7.4	2.8
	PAL	NTSC	PLAY		1.5	0	0.9	1.5	0	0.9	5.5	0	4.9	2.7	12.1	3.3	6.7	12.1	7.4	2.2	7.4	2.8
PAL		SECAM	REC		1.5	0	0.9	1.5	0	0.9	5.5	0	4.9	2.8	12.1	3.3	6.7	12.0	7.3	2.2	7.4	2.8
	SECAM	PAL	PLAY		1.5	0	0.9	1.5	0	0.9	5.5	0	4.9	2.6	12.1	3.3	6.7	12.1	7.4	2.2	7.4	2.8
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9516			Q9517			Q9518			Q9519			Q9520			Q9521		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		7.1	12.0	7.7	7.7	12.0	8.4	3.0	8.4	3.7	7.0	12.0	7.7	0.7	5.0	1.1	1.8	12.0	2.4
	PAL	NTSC	PLAY		7.1	12.1	7.7	7.8	12.1	8.4	3.0	8.4	3.7	7.0	12.0	7.7	0.7	5.0	1.1	1.8	12.0	2.4
PAL		SECAM	REC		7.0	12.0	7.7	7.7	12.0	8.4	3.0	8.4	3.7	7.0	12.0	7.7	0.7	5.0	1.1	1.8	12.0	2.4
	SECAM	PAL	PLAY		6.9	12.1	7.6	7.8	12.1	8.4	3.0	8.4	3.7	6.9	12.1	7.6	0.7	5.0	1.1	1.8	11.9	2.4
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9522			Q9523			Q9524			Q9525			Q9526			Q9527		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.8	11.9	2.4	3.1	12.1	3.7	2.5	12.1	3.1	2.5	12.1	0	1.5	12.1	2.1	2.0	0	1.4
	PAL	NTSC	PLAY		1.8	11.9	2.4	3.1	12.1	3.7	2.5	12.1	3.1	2.5	12.1	0	1.5	12.1	2.1	2.1	0	1.4
PAL		SECAM	REC		1.8	12.0	2.4	3.1	12.1	3.7	2.5	12.1	1.6	2.5	12.1	3.1	1.5	12.1	2.1	2.1	0	1.4
	SECAM	PAL	PLAY		1.9	12.0	2.4	3.1	12.1	3.7	2.5	12.1	3.1	2.5	12.1	0	1.5	12.1	2.1	2.1	0	1.4
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9528			Q9529			Q9530			Q9531			Q9532			Q9533		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		3.9	12.1	4.5	3.9	12.1	4.5	8.6	12.1	9.3	2.4	9.3	3.0	2.5	12.1	3.1	3.2	12.1	3.8
	PAL	NTSC	PLAY		3.9	12.1	4.5	3.9	12.1	4.5	8.6	12.1	9.3	2.4	9.3	3.0	2.5	12.1	3.1	3.1	12.1	3.7
PAL		SECAM	REC		3.9	12.1	4.5	3.9	12.1	4.5	9.1	12.1	9.7	2.1	9.7	2.6	2.1	12.1	2.7	2.7	12.1	3.3
	SECAM	PAL	PLAY		3.9	12.1	4.5	3.9	12.1	4.5	8.4	12.1	9.0	2.7	9.0	3.3	2.8	12.1	3.4	3.4	12.1	4.0
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9534			Q9535			Q9536			Q9537			Q9538			Q9539		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	4.9	0	0	4.6	0	0	0	0.6	0	11.9	0	0	11.9	0	0	11.9	0
	PAL	NTSC	PLAY		0	0	0.6	0	4.2	0	0	11.9	0	0	0	0.6	0	11.9	0	0	11.9	0.1
PAL		SECAM	REC		0	0	0.6	0	4.6	0	0	11.9	0	0	0	0.6	0	11.9	0	0	11.9	0.1
	SECAM	PAL	PLAY		0	4.9	0	0	4.6	0	0	11.9	0	0	11.9	0	0	11.9	0	0	11.9	0
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9540			Q9541			Q9542			Q9543			Q9544			Q9545		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		7.5	11.9	8.0	0	12.1	0	0	4.2	0.1	0	0.9	0.6	1.9	12.1	0.9	1.9	12.1	0.8
	PAL	NTSC	PLAY		7.5	12.0	8.0	0	12.1	0	0	4.2	0.1	0	0.9	0.6	1.9	12.1	0.8	2.0	12.1	0.7
PAL		SECAM	REC		7.5	12.0	8.1	0	12.1	0	0	4.2	0.1	0	0.8	0.6	1.9	12.1	0.8	1.0	12.1	0.7
	SECAM	PAL	PLAY		7.8	12.0	8.1	0	0	0	0	4.2	0.1	0	0.4	0.6	1.7	12.1	0.4	1.7	12.1	0.8
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9546			Q9547			Q9548			Q9549			Q9550			Q9551		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	1.1	0.6	1.9	12.1	0.2	3.0	0	2.4	1.9	11.5	2.4	12.1	4.6	11.5	4.0	12.1	4.6
	PAL	NTSC	PLAY		0	1.1	0.6	1.9	12.1	0.1	3.0	0	2.4	1.9	11.5	2.4	12.1	4.6	11.5	4.0	12.1	4.6
PAL		SECAM	REC		0	1.1	0.6	1.9	12.1	0.7	3.0	0	2.4	1.8	11.5	2.4	12.1	4.6	11.5	4.0	12.1	4.6
	SECAM	PAL	PLAY		0	1.1	0.6	1.7	0	0.3	3.0	0	2.4	1.9	11.5	2.4	12.1	4.6	11.5	4.0	12.1	4.6

ANALOGUE C.B.A. IC

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE
NTSC		PAL	R
	PAL	NTSC	PL
PAL		SECAM	R
	SECAM	PAL	PL



(FOIL SIDE)

955				
C	B			
.9	3.6			
.8	3.6			
.9	3.6			
.9	3.6			

IC952						
	5	6	7	8	9	
2	0	2.4	0	1.1	4.9	
	0	2.4	0	1.1	4.9	
	0	2.4	0	1.1	4.9	
	0	2.4	0	1.1	4.9	

ANALOGUE C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9301			Q9302			Q9303			Q9304			Q9305			Q9306		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	4.9	0	0	4.9	0	0	0	0.7	0	4.9	0	2.3	4.9	2.7	3.7	11.2	4.3
	PAL	NTSC	PLAY		0	4.9	0.1	0	4.9	0	0	4.9	0.1	0	0	0.7	2.3	4.9	2.7	3.7	11.3	4.3
PAL		SECAM	REC		0	4.9	0.1	0	4.9	0	0	4.9	0.1	0	4.9	0	2.3	4.9	2.7	3.7	11.2	4.3
	SECAM	PAL	PLAY		0	4.9	0	0	4.9	0	0	0	0.7	0	4.9	0	2.3	4.9	2.7	3.7	11.3	4.3

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9307			Q9308			Q9309			Q9310			Q9401			Q9402		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		12.0	5.9	11.3	5.3	12.1	5.9	2.4	0	11.3	2.4	0	1.8	1.2	0	0.6	4.8	4.6	4.2
	PAL	NTSC	PLAY		12.0	5.9	11.3	5.3	12.1	5.9	2.4	0	11.3	2.4	0	1.8	1.2	0	0.6	4.8	4.6	4.2
PAL		SECAM	REC		12.0	5.9	11.3	5.3	12.1	5.9	2.7	0	11.6	2.7	0	2.1	1.2	0	0.6	4.8	4.6	4.2
	SECAM	PAL	PLAY		12.0	5.9	11.3	5.3	12.1	5.9	2.4	0	11.3	2.4	0	1.8	1.2	0	0.6	4.8	4.6	4.2

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9403			Q9404			Q9405			Q9406			Q9407			Q9408		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.1	0.6	1.7	5.3	2.4	1.5	11.3	2.1	12.0	5.1	11.4	4.5	12.0	5.1	1.6	7.6	2.2
	PAL	NTSC	PLAY		0	0.1	0.6	1.7	5.3	2.3	1.5	11.3	2.1	12.0	5.1	11.3	4.5	12.0	5.1	1.6	7.6	2.2
PAL		SECAM	REC		0	0.1	0.6	1.7	5.3	2.3	1.5	11.4	2.1	12.0	5.1	11.4	4.5	12.0	5.1	1.6	7.6	2.2
	SECAM	PAL	PLAY		0	0	0.6	1.7	5.4	2.3	1.5	11.4	2.1	12.0	5.1	11.3	4.5	12.0	5.1	1.5	7.6	2.2

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9409			Q9410			Q9411			Q9501			Q9502			Q9503		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		8.7	12.0	9.4	1.8	4.8	2.2	2.3	4.8	2.9	4.5	12.1	5.1	5.1	0	4.5	3.6	0	2.9
	PAL	NTSC	PLAY		8.7	12.0	9.4	1.8	4.8	2.2	2.3	4.8	2.9	4.5	12.1	5.1	5.1	0	4.5	3.6	0	2.9
PAL		SECAM	REC		8.7	12.0	9.3	1.8	4.8	2.2	2.3	4.8	2.9	4.5	12.1	5.1	5.1	0	4.5	3.6	0	2.9
	SECAM	PAL	PLAY		8.7	12.0	9.3	1.7	4.8	2.2	2.3	4.8	2.9	4.5	12.1	5.1	5.1	0	4.5	3.6	0	2.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9504			Q9505			Q9506			Q9507			Q9508			Q9509		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.8	0	2.3	3.5	0	2.8	0	3.3	0.1	0	0.3	0.6	2.2	0	1.5	2.2	0	1.5
	PAL	NTSC	PLAY		2.9	0	2.3	3.5	0	0	0	3.3	0.1	0	0.3	0.6	2.2	0	1.5	2.2	0	1.5
PAL		SECAM	REC		2.9	0	2.3	3.4	0	2.8	0	3.3	0.1	0	0.3	0.6	2.2	0	1.5	2.2	0	1.5
	SECAM	PAL	PLAY		2.9	0	2.3	3.4	0	2.8	0	3.3	0.1	0	0.3	0.6	2.2	0	1.5	2.2	0	1.5

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9510			Q9511			Q9512			Q9513			Q9514			Q9515		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.5	0	0.9	1.5	0	0.9	5.5	0	4.9	2.7	12.1	3.3	6.7	12.0	7.4	2.2	7.4	2.8
	PAL	NTSC	PLAY		1.5	0	0.9	1.5	0	0.9	5.5	0	4.9	2.7	12.1	3.3	6.7	12.1	7.4	2.2	7.4	2.8
PAL		SECAM	REC		1.5	0	0.9	1.5	0	0.9	5.5	0	4.9	2.8	12.1	3.3	6.7	12.0	7.3	2.2	7.4	2.8
	SECAM	PAL	PLAY		1.5	0	0.9	1.5	0	0.9	5.5	0	4.9	2.6	12.1	3.3	6.7	12.1	7.4	2.2	7.4	2.8

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9516			Q9517			Q9518			Q9519			Q9520			Q9521		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		7.1	12.0	7.7	7.7	12.0	8.4	3.0	8.4	3.7	7.0	12.0	7.7	0.7	5.0	1.1	1.8	12.0	2.4
	PAL	NTSC	PLAY		7.1	12.1	7.7	7.8	12.1	8.4	3.0	8.4	3.7	7.0	12.0	7.7	0.7	5.0	1.1	1.8	12.0	2.4
PAL		SECAM	REC		7.0	12.0	7.7	7.7	12.0	8.4	3.0	8.4	3.7	7.0	12.0	7.7	0.7	5.0	1.1	1.8	12.0	2.4
	SECAM	PAL	PLAY		6.9	12.1	7.6	7.8	12.1	8.4	3.0	8.4	3.7	6.9	12.1	7.6	0.7	5.0	1.1	1.8	11.9	2.4

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9522			Q9523			Q9524			Q9525			Q9526			Q9527		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		1.8	11.9	2.4	3.1	12.1	3.7	2.5	12.1	3.1	2.5	12.1	0	1.5	12.1	2.1	2.0	0	1.4
	PAL	NTSC	PLAY		1.8	11.9	2.4	3.1	12.1	3.7	2.5	12.1	3.1	2.5	12.1	0	1.5	12.1	2.1	2.1	0	1.4
PAL		SECAM	REC		1.8	12.0	2.4	3.1	12.1	3.7	2.5	12.1	1.6	2.5	12.1	3.1	1.5	12.1	2.1	2.1	0	1.4
	SECAM	PAL	PLAY		1.9	12.0	2.4	3.1	12.1	3.7	2.5	12.1	3.1	2.5	12.1	0	1.5	12.1	2.1	2.1	0	1.4

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9528			Q9529			Q9530			Q9531			Q9532			Q9533		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		3.9	12.1	4.5	3.9	12.1	4.5	8.6	12.1	9.3	2.4	9.3	3.0	2.5	12.1	3.1	3.2	12.1	3.8
	PAL	NTSC	PLAY		3.9	12.1	4.5	3.9	12.1	4.5	8.6	12.1	9.3	2.4	9.3	3.0	2.5	12.1	3.1	3.1	12.1	3.7
PAL		SECAM	REC		3.9	12.1	4.5	3.9	12.1	4.5	9.1	12.1	9.7	2.1	9.7	2.6	2.1	12.1	2.7	2.7	12.1	3.3
	SECAM	PAL	PLAY		3.9	12.1	4.5	3.9	12.1	4.5	8.4	12.1	9.0	2.7	9.0	3.3	2.8	12.1	3.4	3.4	12.1	4.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9534			Q9535			Q9536			Q9537			Q9538			Q9539		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	4.9	0	0	4.6	0	0	0	0.6	0	11.9	0	0	11.9	0	0	11.9	0
	PAL	NTSC	PLAY		0	0	0.6	0	4.2	0	0	11.9	0	0	0	0.6	0	11.9	0	0	11.9	0.1
PAL		SECAM	REC		0	0	0.6	0	4.6	0	0	11.9	0	0	0	0.6	0	11.9	0	0	11.9	0.1
	SECAM	PAL	PLAY		0	4.9	0	0	4.6	0	0	11.9	0	0	11.9	0	0	11.9	0	0	11.9	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9540			Q9541			Q9542			Q9543			Q9544			Q9545		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		7.5	11.9	8.0	0	12.1	0	0	4.2	0.1	0	0.9	0.6	1.9	12.1	0.9	1.9	12.1	0.8
	PAL	NTSC	PLAY		7.5	12.0	8.0	0	12.1	0	0	4.2	0.1	0	0.9	0.6	1.9	12.1	0.8	2.0	12.1	0.7
PAL		SECAM	REC		7.5	12.0	8.1	0	12.1	0	0	4.2	0.1	0	0.8	0.6	1.9	12.1	0.8	1.0	12.1	0.7
	SECAM	PAL	PLAY		7.8	12.0	8.1	0	0	0	0	4.2	0.1	0	0.4	0.6	1.7	12.1	0.4	1.7	12.1	0.8

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9546			Q9547			Q9548			Q9549			Q9550			Q9551		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	1.1	0.6	1.9	12.1	0.2	3.0	0	2.4	1.9	11.5	2.4	12.1	4.6	11.5	4.0	12.1	4.6
	PAL	NTSC	PLAY		0	1.1	0.6	1.9	12.1	0.1	3.0	0	2.4	1.9	11.5	2.4	12.1	4.6	11.5	4.0	12.1	4.6
PAL		SECAM	REC		0	1.1	0.6	1.9	12.1	0.7	3.0	0	2.4	1.8	11.5	2.4	12.1	4.6	11.5	4.0	12.1	4.6
	SECAM	PAL	PLAY		0	1.1	0.6	1.7	0	0.3	3.0	0	2.4	1.9	11.5	2.4	12.1	4.6	11.5	4.0	12.1	4.6

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INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9510																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		0	4.7	4.9	0	4.8	0.3	4.6	0	3.9	0.8	4.0	0	4.9	4.0	0	4.9				
	PAL	NTSC	PLAY		0	4.6	4.9	0	4.8	0.3	4.6	0	3.9	0.7	4.1	0	4.9	4.0	0	4.9				
PAL		SECAM	REC		0	4.6	4.9	0	4.8	0.4	4.5	0	3.9	0.8	4.0	0	4.9	4.0	0	4.9				
	SECAM	PAL	PLAY		0	4.6	5.0	0.6	4.8	0.3	4.6	0	3.9	0.8	4.1	0	4.9	4.0	0.3	4.9				

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9511																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		0	4.6	4.9	0	4.1	0.1	4.8	0	4.7	0.2	4.9	4.8	4.9	4.5	0	4.9				
	PAL	NTSC	PLAY		0	4.7	4.9	0	4.2	0.1	4.8	0	4.7	0.2	4.9	4.8	4.9	4.5	0	4.9				
PAL		SECAM	REC		0	4.7	4.9	0	4.2	0.1	4.8	0	4.7	0.2	4.9	4.8	4.9	4.5	0	4.9				
	SECAM	PAL	PLAY		0	4.7	4.9	0	4.2	0.1	4.9	0	4.7	0.2	4.9	4.8	4.9	4.5	0	4.9				

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9512																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		0	4.5	4.9	0.1	4.9	0.2	4.8	0	4.8	0.1	4.9	0.1	4.9	4.7	0	4.9				
	PAL	NTSC	PLAY		0	4.5	4.9	0.1	4.9	0.1	4.8	0	4.8	0.1	4.9	0.1	4.9	4.7	0	4.9				
PAL		SECAM	REC		0	4.5	4.9	0.2	4.9	0.2	4.8	0	4.8	0.1	4.9	0.1	4.9	4.7	0	4.9				
	SECAM	PAL	PLAY		0	3.7	5.0	0.2	5.0	0.2	0.4	0	4.8	0.1	4.9	0.1	4.9	4.7	0	4.9				

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9513																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		4.2	4.9	0.1	0	4.2	1.4	0.8	0	2.0	0.6	0.5	4.9	0.1	1.1	0	1.3	0.1	3.8	2.5	2.1
	PAL	NTSC	PLAY		4.2	4.9	0.1	0	4.2	1.4	0.8	0	2.0	0.6	0.5	4.9	0.1	1.1	0	1.3	0.1	3.8	2.7	2.1
PAL		SECAM	REC		4.2	4.9	0.1	0	4.2	1.4	0.8	0	2.0	0.6	0.5	4.9	0.1	1.1	0	1.3	0.1	3.8	2.8	2.1
	SECAM	PAL	PLAY		4.2	4.8	0.1	0	4.2	1.4	0.8	0	1.0	0.6	0.5	4.8	0.1	1.1	0	1.3	0.1	3.8	2.8	2.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9513										IC9514									
				PIN NO.	21	22	23	24							1	2	3	4	5	6	7	8		
NTSC		PAL	REC		3.1	4.1	4.9	4.6							12.0	7.2	6.6	0	6.6	5.7	12.0	12.0		
	PAL	NTSC	PLAY		3.1	4.1	4.9	4.6							12.1	5.8	6.6	0	6.6	7.7	0	12.1		
PAL		SECAM	REC		3.1	4.1	4.9	4.6							12.0	5.8	5.8	0	6.6	7.7	0	12.0		
	SECAM	PAL	PLAY		3.1	4.1	4.9	4.6							12.1	5.7	6.5	0	6.6	8.6	0	1.7		

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9515																			
				PIN NO.	1	2	3	4	5	6	7	8	9											
NTSC		PAL	REC		3.0	2.7	8.6	1.0	0	1.5	3.4	0.4	9.7											
	PAL	NTSC	PLAY		3.0	2.7	8.7	0.9	0	0	2.7	0.4	9.7											
PAL		SECAM	REC		3.0	2.7	8.6	0.9	0	0	2.9	0.4	9.7											
	SECAM	PAL	PLAY		3.1	2.8	8.7	0.9	0	0	2.8	0.4	8.7											

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9516																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		1.8	4.0	4.0	4.0	3.0	0	0	0	9.6	0	8.1	1.8	4.0	4.0	4.0	12.1				
	PAL	NTSC	PLAY		1.8	4.0	4.0	4.0	0.1	0	0	0	9.6	12.1	8.1	1.8	1.8	1.8	0.2	12.1				
PAL		SECAM	REC		1.8	4.0	4.0	4.0	3.0	0	0	0	9.7	12.1	8.1	1.8	1.8	1.8	0	12.1				
	SECAM	PAL	PLAY		1.8	4.0	4.0	4.0	3.0	0	0	0	9.6	12.1	0	1.8	1.8	1.8	1.8	12.1				

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9517										IC9518									
				PIN NO.	1	2	3	4	5	6	7	8	9		1	2	3	4	5	6	7	8	9	
NTSC		PAL	REC		6.2	0	6.2	0	0	6.2	0	5.4	9.1		6.3	0	6.3	0	0	6.2	0	5.5	9.1	
	PAL	NTSC	PLAY		6.2	3.8	6.2	0	0	6.2	0	5.5	9.1		6.2	3.8	6.3	0	0	6.3	0	5.5	9.1	
PAL		SECAM	REC		6.2	3.8	6.2	0	0	6.2	0	5.4	9.1		6.2	3.8	6.3	0	0	6.3	0	5.5	9.1	
	SECAM	PAL	PLAY		6.3	2.9	0	0	0	5.9	0	5.5	9.1		6.3	0	6.3	0	0	6.3	0	5.5	9.1	

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9519																			
				PIN NO.	1	2	3																	
NTSC		PAL	REC		12.1	0	5.0																	
	PAL	NTSC	PLAY		12.1	0	5.0																	
PAL		SECAM	REC		12.1	0	5.0																	
	SECAM	PAL	PLAY		12.1	0	5.0																	

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9520																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		0	4.8	4.9	0	4.2	0.1	4.9	0	4.9	0	4.9	4.9	4.9	4.8	0	4.9				
	PAL	NTSC	PLAY		0	4.8	4.9	1.3	4.2	0.1	4.9	0	4.9	0.1	4.9	5.1	4.9	4.8	0	4.9				
PAL		SECAM	REC		0	4.8	4.9	0	4.2	0.1	4.9	0	4.8	0	4.9	4.9	4.9	4.9	0	4.9				
	SECAM	PAL	PLAY		0	4.8	4.9	0	3.1	0	4.9	0	4.9	0	4.9	4.9	4.9	4.9	0	4.9				

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9521																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		0	4.9	4.2	4.2	4.9	0	0	0	4.9	0	4.3	5.0	4.9	4.9	4.9	4.9				
	PAL	NTSC	PLAY		0	4.9	4.2	4.2	4.8	0	0	0	4.9	4.4	3.7	3.7	0	0	0	4.9				
PAL		SECAM	REC		0	4.9	4.2	4.2	4.9	0	0	0	4.9	4.4	4.3	5.0	0	0	0	4.9				
	SECAM	PAL	PLAY		0	4.9	3.5	4.2	4.9	0	0	0	4.9	4.5	3.7	0.2	0.1	0	0	4.9				

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9901																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		4.2	4.9	0.1	0	4.3	0.8	0.8	0	2.0	0.6	1.3	4.9	0.1	1.2	0	1.3	3.0	5.0	2.5	2.1
	PAL	NTSC	PLAY		4.3	4.9	0.1	0	4.3	0.8	0.8	0	2.0	1.0	2.7	4.9	0.1	1.2	0	1.7	3.2	5.0	2.7	2.1
PAL		SECAM	REC		4.3	4.9	0.1	0	4.3	0.8	0.8	0	2.0	1.0	2.5	4.9	0.1	1.2	0	2.0	3.5	4.9	2.8	2.1
	SECAM	PAL	PLAY		4.3	4.9	0.1	0	4.3	0.8	0.8	0	1.1	0.5	1.0	4.9	0.1	1.2	0	14.0	0	0	0	0

ANALOGUE C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC901															
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC	0	1.6	4.9	0	4.8	1.8	3.1	0	2.0	2.9	4.8	0	4.9	1.7	0	4.9
	PAL	NTSC	PLAY	0	1.7	4.9	0	4.8	1.8	3.1	0	2.0	2.9	4.8	0	4.9	1.6	0	4.9
PAL		SECAM	REC	0	1.8	4.9	0	4.8	1.8	3.1	0	2.0	2.9	4.8	0	4.9	1.8	0	4.9
	SECAM	PAL	PLAY	0	1.6	4.9	0	4.8	1.8	3.1	0	2.6	2.9	4.8	0	4.9	1.7	0	4.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC902													
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NTSC		PAL	REC	4.9	0.1	2.0	0	4.2	0	0	0	4.2	0	2.9	0.1	4.9	4.9
	PAL	NTSC	PLAY	4.9	0.1	2.0	0	4.2	0	0	0	4.2	0	3.0	0.1	4.9	4.9
PAL		SECAM	REC	4.9	0	2.0	0	4.3	0	0	0	4.3	0	2.9	0.1	4.9	4.9
	SECAM	PAL	PLAY	4.9	0	2.0	0	4.2	0	0	0	4.2	0	2.9	0	4.8	4.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC903													
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NTSC		PAL	REC	4.8	4.8	0.1	0	4.9	0	0	0	0	0	0	0	4.9	4.9
	PAL	NTSC	PLAY	4.9	3.3	0.1	0	5.0	0	0	0	0	0	0	0	4.9	4.9
PAL		SECAM	REC	0	0	0	0	4.9	0	0	0	0	0	0	0	4.9	4.9
	SECAM	PAL	PLAY	0	4.7	0	0	4.9	0	0	0	0	0	0	0	4.9	4.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC904															
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC	0	24	0	0	0	0	24	0	24	2.0	0.1	0.1	2.4	0	0	4.9
	PAL	NTSC	PLAY	0	0	2.4	2.0	0	2.4	2.5	0	2.5	2.0	0.1	0.8	2.5	0	0	4.9
PAL		SECAM	REC	0	2.2	2.4	2.0	2.4	2.4	2.4	0	2.5	2.0	0	1.0	2.4	0	0	4.9
	SECAM	PAL	PLAY	0	2.3	2.4	2.0	2.4	2.5	2.4	0	2.4	2.0	0	1.0	2.4	0	0	4.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC9301																			
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC	0	1.1	2.6	0.2	0.2	4.6	2.9	2.9	4.9	3.3	3.3	1.1	4.9	4.9	3.1	0	0.8	0.3	0.8	0.5
	PAL	NTSC	PLAY	0	1.1	2.6	2.6	0.5	4.7	2.9	2.9	4.9	3.3	3.3	0	4.9	4.9	3.1	0	0.8	0.7	0.8	0.5
PAL		SECAM	REC	0	1.1	2.6	2.7	0.9	4.8	2.9	2.9	4.9	3.3	3.3	1.1	4.9	4.8	3.2	0	0.8	0	0.8	0.6
	SECAM	PAL	PLAY	0	1.1	2.6	2.7	0.1	4.8	2.9	2.9	4.9	3.3	3.3	0.9	4.9	5.0	3.1	0	0.8	0	0.8	0.5

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC9301							
			PIN NO.	21	22	23	24	25	26	27	28
NTSC		PAL	REC	0.3	0	2.8	0.1	2.8	4.8	2.3	4.9
	PAL	NTSC	PLAY	1.1	0	2.8	1.0	2.8	0	2.3	4.9
PAL		SECAM	REC	0	0	2.8	0	2.8	4.8	2.3	4.9
	SECAM	PAL	PLAY	0	0	2.9	0	2.9	4.9	2.3	4.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC9302																			
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC	0	2.4	2.5	1.8	0.6	2.4	4.9	2.3	2.3	2.3	0	4.9	1.8	0	2.2	2.7	0	2.2	1.8	1.8
	PAL	NTSC	PLAY	0	2.4	2.5	1.7	0.5	2.4	4.9	2.3	0	2.3	0	4.9	1.8	0	2.2	2.7	0	2.2	1.8	1.8
PAL		SECAM	REC	0	2.4	2.5	2.9	0.5	2.4	4.9	2.3	0	2.3	0	4.9	1.8	0	2.2	2.7	0	2.1	1.8	1.8
	SECAM	PAL	PLAY	0	2.4	2.5	1.8	0.5	2.4	4.9	2.2	0	2.3	0	4.9	1.8	0	2.2	2.6	0	2.1	1.8	1.8

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC9302			
			PIN NO.	21	22	23	24
NTSC		PAL	REC	1.8	1.8	1.8	1.8
	PAL	NTSC	PLAY	1.8	1.8	1.8	1.8
PAL		SECAM	REC	1.8	1.8	1.8	1.8
	SECAM	PAL	PLAY	1.8	1.8	1.8	1.8

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC9303													
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NTSC		PAL	REC	1.7	1.8	1.8	1.8	5.0	0	0	1.8	1.8	1.8	1.8	0	0	4.9
	PAL	NTSC	PLAY	1.7	1.7	1.7	1.7	0.1	0.1	0	1.8	1.7	1.7	1.8	0	4.9	4.9
PAL		SECAM	REC	1.7	2.7	2.7	1.8	0.1	0.1	0	1.8	2.8	2.8	1.8	0	0	4.9
	SECAM	PAL	PLAY	1.7	0	1.8	0	0	0	0	1.8	1.8	1.8	1.8	0	0	4.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC9304															
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC	1.8	2.0	1.5	1.5	1.5	0	0	0	12.1	12.1	12.1	1.8	1.8	1.8	1.8	12.1
	PAL	NTSC	PLAY	1.8	2.0	0	0.2	0	0	0	0	12.1	12.1	0	1.8	1.8	1.8	0	12.2
PAL		SECAM	REC	1.8	2.0	0.2	0.2	0.2	0	0	0	0	0	12.1	1.8	1.8	1.8	2.0	12.1
	SECAM	PAL	PLAY	1.8	2.0	1.6	1.5	1.4	0	0	0	12.1	12.1	12.1	1.8	1.8	1.8	1.8	12.2

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC9401																	
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
NTSC		PAL	REC	11.7	12.0	1.2	12.0	5.5	0.4	1.3	0.1	0.1	7.5	−0.4	−0.5	0	5.8	6.0	5.9	5.9	0
	PAL	NTSC	PLAY	12.1	12.1	1.2	12.0	5.5	0.4	1.3	0.1	0.3	7.4	−0.4	−0.6	0	5.8	5.7	5.9	5.9	0
PAL		SECAM	REC	11.7	11.9	1.2	12.0	5.5	0.4	1.3	0.1	0.3	7.4	−0.3	−0.4	0	5.8	6.2	5.9	6.0	0
	SECAM	PAL	PLAY	12.0	12.1	1.2	12.0	5.5	0.4	1.3	0.1	0.2	7.4	−0.2	−0.3	0	5.8	6.0	5.9	5.9	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE / REF NO.	IC9402															
			PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC	2.6	3.5	4.8	1.7	2.4	0	2.8	1.7	3.5	3.5	2.6	1.6	0.1	3.5	2.6	1.6
	PAL	NTSC	PLAY	2.6	3.5	4.8	1.6	2.4	0	2.6	1.7	3.5	3.5	2.6	1.6	0.1	3.5	2.6	1.6
PAL		SECAM	REC	2.6	3.5	4.8	1.6	2.3	0	2.9	1.7	3.5	3.5	2.6	1.6	0.1	3.5	3.0	1.6
	SECAM	PAL	PLAY	2.6	3.5	4.8	1.6	2.3	0	2.7	1.7	3.5	3.5	2.6	1.6	0.1	3.5	2.6	1.6

ANALOGUE C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9403																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		2.8	0	3.5	4.8	3.4	1.8	3.5	3.5	0	3.5	0.1	0.1	0.6	3.4	2.8	2.4	2.6	2.4	3.1	2.6
	PAL	NTSC	PLAY		2.8	0	3.5	4.8	3.4	1.8	3.5	3.5	0	3.5	0.1	0.1	0.6	3.4	2.6	2.3	2.6	2.3	2.9	2.6
PAL		SECAM	REC		2.8	0	3.5	4.8	3.4	1.7	3.5	3.5	0	3.5	0.1	0.1	0.6	3.4	2.9	2.5	2.6	2.4	3.1	2.6
	SECAM	PAL	PLAY		2.8	0	3.5	4.8	3.4	1.7	3.5	3.5	0	3.5	0.1	0.1	0.6	3.4	2.8	2.4	2.6	2.4	3.0	2.6
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9403										IC9501									
				PIN NO.	21	22	23	24							1	2	3	4	5	6	7	8	9	
NTSC		PAL	REC		3.3	3.4	2.6	0							6.2	3.5	6.2	0	0	6.2	0	5.4	9.1	
	PAL	NTSC	PLAY		3.3	3.4	2.6	0							6.2	0	6.2	4.1	0	6.2	0	5.4	9.1	
PAL		SECAM	REC		3.2	3.4	2.6	0							6.2	0	6.2	4.1	0	6.2	0	5.4	9.1	
	SECAM	PAL	PLAY		3.3	3.4	2.6	0							6.3	0	6.3	0	0	6.2	0	5.5	9.1	
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9502																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		6.2	3.5	6.2	0	0	6.2	0	5.4	9.1											
	PAL	NTSC	PLAY		6.2	0	6.2	4.1	0	6.2	0	5.4	9.1											
PAL		SECAM	REC		6.2	0	6.2	4.1	0	6.2	0	5.4	9.1											
	SECAM	PAL	PLAY		6.2	0	6.2	0	0	6.2	0	5.4	9.1											
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9503																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		3.9	0.4	0.3	0	3.5	1.9	5.0	4.9	4.0	2.3	0.7	0.1	5.0	3.1	4.1	3.0	3.6	0	2.0	2.5
	PAL	NTSC	PLAY		3.9	0.4	0.3	0	3.5	2.3	5.0	0	4.0	2.2	0.7	0	5.0	3.1	4.0	3.0	3.6	0	2.0	2.5
PAL		SECAM	REC		3.8	0.3	0.2	0	3.5	2.3	5.0	0	3.9	2.2	0.7	0.1	5.0	3.1	4.0	3.0	3.6	0	2.0	2.4
	SECAM	PAL	PLAY		3.9	0.3	0.3	0	3.5	2.4	5.0	0	3.9	2.2	0.7	0.1	5.0	3.1	4.0	3.0	3.6	0	2.0	2.5
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9503																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
NTSC		PAL	REC		0	4.0	5.0	2.2	3.1	0.7	2.7	4.3	3.3	0	5.0	4.0	2.8	2.0	2.2	3.6				
	PAL	NTSC	PLAY		0	4.0	5.0	2.2	3.2	0	0	4.3	3.3	0	5.0	4.0	2.9	2.0	2.2	3.6				
PAL		SECAM	REC		0	4.0	5.0	2.1	3.2	0.7	2.7	4.3	3.3	0	5.0	4.0	2.8	2.0	2.2	3.6				
	SECAM	PAL	PLAY		0	4.0	5.0	2.3	2.7	0.7	2.7	4.3	3.3	0	5.0	4.0	2.8	2.0	2.2	3.6				
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9504																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		5.9	3.5	4.5	0	4.5	4.5	0	5.9	5.9	0	5.9	0	12.1	6.0	0	5.9				
	PAL	NTSC	PLAY		5.9	0	4.5	0	4.5	4.5	0	5.9	5.9	0	5.9	4.9	12.0	5.9	0	5.9				
PAL		SECAM	REC		5.9	0	4.5	0	4.5	4.5	0	5.9	5.9	0	5.9	4.9	12.1	5.9	0	5.9				
	SECAM	PAL	PLAY		5.9	0	4.5	0	4.5	4.5	5.0	5.9	5.9	0	5.9	0	12.1	5.9	0	5.9				
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9505																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		6.0	3.0	4.5	0	4.5	4.5	3.0	5.9	5.9	0	5.9	3.0	12.1	5.9	0	5.9				
	PAL	NTSC	PLAY		6.0	3.0	4.5	0	4.5	4.5	0	5.9	5.9	0	5.9	3.0	12.1	5.9	0	5.9				
PAL		SECAM	REC		5.9	0	4.5	0	4.5	4.5	0	5.9	5.9	0	5.9	0	12.1	5.9	0	5.9				
	SECAM	PAL	PLAY		5.9	0	4.5	0	4.5	4.5	0	5.9	5.9	0	5.9	0	12.1	5.9	0	5.9				
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9506																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		0	4.7	4.9	0	4.1	0.2	4.8	0	4.8	0.2	3.9	0	4.9	4.6	0	4.9				
	PAL	NTSC	PLAY		0	4.7	4.9	0	4.1	0.1	4.8	0	4.8	0.2	3.9	0	4.9	4.6	0	4.9				
PAL		SECAM	REC		0	4.7	4.9	0	4.1	0.1	4.8	0	4.8	0.2	3.9	0	4.9	4.6	0	4.9				
	SECAM	PAL	PLAY		0	4.7	4.9	0	4.1	0.1	4.8	0	4.6	0.3	3.9	0	4.9	4.3	0	4.9				
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9507																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		7.8	8.4	7.7	4.8	5.6	8.4	5.3	4.9	0	2.4	2.4	8.0	0	0	3.4	8.2	9.5	8.0	2.5	7.2
	PAL	NTSC	PLAY		7.7	8.4	7.7	4.8	5.6	8.4	5.3	4.9	0	2.4	2.4	8.1	12.1	5.9	3.4	8.2	9.5	8.1	2.5	5.8
PAL		SECAM	REC		7.7	8.4	7.7	4.8	5.6	8.4	5.3	4.9	0	2.4	2.4	8.1	12.0	5.9	3.4	8.2	9.5	7.8	2.5	5.8
	SECAM	PAL	PLAY		7.6	8.3	7.6	4.8	4.5	8.3	4.6	4.8	0	2.4	2.4	8.2	12.1	5.9	3.4	8.2	9.5	9.3	2.9	5.7
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9507																			
				PIN NO.	21	22	23	24	25	26	27	28												
NTSC		PAL	REC		5.8	4.3	6.0	2.1	0	12.0	0	0												
	PAL	NTSC	PLAY		7.8	4.3	6.0	2.0	0	0	0	12.0												
PAL		SECAM	REC		7.7	4.3	6.0	2.2	0	0	0	12.0												
	SECAM	PAL	PLAY		8.7	4.3	6.0	1.8	0	0	11.7	0												
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9508																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
NTSC		PAL	REC		4.6	0.2	3.9	0.8	4.6	0.4	0	4.3	0.4	0.2	4.7	4.7	0.2	4.9						
	PAL	NTSC	PLAY		4.6	0	3.9	0.8	4.6	0	0	4.3	0	0.2	4.7	4.7	0.2	4.9						
PAL		SECAM	REC		4.5	0.2	3.9	0.7	5.1	0	0	4.7	0	0.2	4.7	4.7	0.2	4.9						
	SECAM	PAL	PLAY		4.6	0.2	3.9	0.8	5.1	0	0	4.7	0	0.2	4.7	4.7	0.2	4.9						
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9509																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		0.1	0.1	0.2	0.2	0.2	0	0	0	3.0	3.0	3.0	0.8	0.8	0.8	0.1	4.9				
	PAL	NTSC	PLAY		0.1	0.2	0.2	0.2	0.2	0	0	0	3.0	3.0	3.0	0.8	0.8	0.8	0.1	4.9				
PAL		SECAM	REC		0	0.2	0	0.2	0.2	3.6	0	0	0	0	0	0.7	0	0.8	0.6	4.9				
	SECAM	PAL	PLAY		0	0.2	0	0.2	0.2	0	0	0	0	0	0	0.8	0	0.8	0.2	5.0				

ANALOGUE C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9552			Q9553			Q9554			Q9555			Q9558			Q9901		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		4.6	0	4.0	2.7	12.1	3.3	0	4.4	0.8	0	4.8	−0.2	3.3	12.1	3.9	4.2	5.0	4.8
	PAL	NTSC	PLAY		2.4	0	1.8	2.8	12.1	3.3	0	4.4	0.7	0	4.8	−0.1	3.3	12.1	4.0	4.2	5.0	4.8
PAL		SECAM	REC		2.4	0	1.8	2.7	12.1	3.3	0	4.4	0.7	0	4.8	−0.1	3.3	12.1	4.0	4.2	5.0	4.8
	SECAM	PAL	PLAY		2.4	0	1.8	2.6	12.2	3.2	0	4.4	0.7	0	4.8	−0.1	3.2	12.1	3.9	4.2	5.0	4.8

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR901			QR902			QR903											
				PIN NO.	E	C	B	E	C	B	E	C	B									
NTSC		PAL	REC		0	0	4.3	0	0	3.0	0	1.7	2.6									
	PAL	NTSC	PLAY		0	0	3.7	0	0	3.0	0	0	3.8									
PAL		SECAM	REC		0	0	4.3	0	4.2	0	0	0	3.7									
	SECAM	PAL	PLAY		0	0	3.7	0	4.1	0	0	0	3.7									

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9301			QR9302			QR9303			QR9304			QR9305					
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
NTSC		PAL	REC		0	0.9	0	0	4.8	0	0	11.3	0	0	12.1	0	0	12.1	0			
	PAL	NTSC	PLAY		0	0	4.9	0	0	4.9	0	11.3	0	0	0	4.1	0	12.1	0			
PAL		SECAM	REC		0	0.9	0	0	4.8	0	0	11.6	0	0	12.1	0	0	0	5.0			
	SECAM	PAL	PLAY		0	0.9	0	0	4.9	0	0	11.3	0.1	0	12.1	0	0	12.1	0			

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9501			QR9502			QR9503			QR9504			QR9505			QR9506		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0	4.0	0	0	0	0	0	3.1	0	3.1	0	0	0	5.2	0	0	4.5
	PAL	NTSC	PLAY		0	4.1	0	0	3.8	0	0	3.8	0	0	0	4.9	0	0	5.2	0	3.2	0
PAL		SECAM	REC		0	4.1	0	0	3.8	0	0	3.8	0	0	0	4.9	0	0	5.2	0	3.2	0
	SECAM	PAL	PLAY		0	0	4.0	0	0	5.0	0	0	3.1	0	3.1	0	0	0	5.2	0	3.2	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9507			QR9509			QR9510			QR9511			QR9512			QR9513		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	3.5	0	0	0	5.0	0	11.7	0	0	8.1	0	0	6.9	0	0	0	7.0
	PAL	NTSC	PLAY		0	0	3.2	0	8.1	0	0	0	8.1	0	8.1	0	0	0	4.4	0	11.7	0
PAL		SECAM	REC		0	0	3.2	0	8.1	0	0	0	8.1	0	8.1	0	0	0	4.4	0	11.7	0
	SECAM	PAL	PLAY		0	1.8	3.2	0	8.1	0	0	0	8.1	0	0	5.0	0	7.0	0	0	0	7.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9514			QR9515			QR9516			QR9517			QR9518			QR9519		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0	8.1	0	4.8	0	0	4.8	0	0	3.1	0	0	0	8.2	0	8.2	0
	PAL	NTSC	PLAY		0	0	8.1	0	0	4.9	0	4.8	0	0	3.1	0	0	0	8.2	0	0	0
PAL		SECAM	REC		0	0	8.1	0	4.8	0	0	0	4.9	0	0	5.0	0	3.1	0	0	0	5.0
	SECAM	PAL	PLAY		0	12.0	0	0	0	5.0	0	4.8	0	0	3.1	0	0	0	8.2	0	8.2	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9520			QR9521			QR9522			QR9523			QR9524			QR9525		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		4.9	4.7	4.9	4.9	4.9	0	0	0	3.5	12.1	7.9	12.1	0	0	5.2	0	5.2	0.5
	PAL	NTSC	PLAY		4.9	4.9	0	4.9	4.7	4.9	0	4.9	0	0	7.9	12.1	0	0	5.2	0	5.2	0.5
PAL		SECAM	REC		4.9	4.9	0	4.9	4.7	4.9	0	4.9	0	12.1	7.9	12.1	0	0	5.2	0	5.2	0.5
	SECAM	PAL	PLAY		4.9	4.5	4.9	4.9	4.5	4.9	0	4.9	0	12.1	12.1	0	0	0	5.2	0	5.2	0.5

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9526			QR9527			QR9528			QR9529			QR9530			QR9531		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0	2.8	4.9	4.9	0	0	0.8	0.2	0	0	3.5	0	9.6	0	0	0	2.6
	PAL	NTSC	PLAY		0	4.9	0	4.9	4.6	4.9	0	0.8	0.2	0	12.1	0	0	9.7	0	0	4.1	0
PAL		SECAM	REC		0	4.9	0	4.9	4.6	4.9	0	0.9	0.2	0	12.1	0	0	9.6	0	0	0	2.6
	SECAM	PAL	PLAY		0	4.9	0	0	4.9	4.9	0	0.4	0.3	0	12.1	0	0	9.6	0	0	0	2.6

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9532			QR9533			QR9534			QR9535			QR9537			QR9540		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	2.6	0	4.9	4.9	0	0	0	5.0	0	12.1	0	0	0	5.4	0	0.5	0.3
	PAL	NTSC	PLAY		0	0	4.4	4.9	4.6	4.9	0	4.9	0.1	0	12.1	0	0	0	5.4	0	0.1	0.4
PAL		SECAM	REC		0	2.6	0	4.9	4.6	4.9	0	4.9	0.1	0	12.1	0	0	0	5.4	0	0.1	0.3
	SECAM	PAL	PLAY		0	2.6	0	4.9	4.9	0	0	0	5.0	0	0	5.0	0	0	5.4	0	0.1	0.3

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9542																	
				PIN NO.	E	C	B															
NTSC		PAL	REC		0	0.1	0															
	PAL	NTSC	PLAY		0	0.1	0															
PAL		SECAM	REC		0	0.2	0.2															
	SECAM	PAL	PLAY		0	0.1	0															

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9901			QR9902			QR9903			QR9904			QR9905			QR9906		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	2.8	0.7	5.0	2.2	2.8	0	4.8	0.1	0	2.8	0	0	0	2.8	12.1	12.1	0
	PAL	NTSC	PLAY		0	2.8	0.7	5.0	2.2	2.8	0	4.8	0.1	0	0	4.4	0	12.0	0	12.0	5.9	12.0
PAL		SECAM	REC		0	2.8	0.7	5.0	2.2	2.8	0	4.8	0	0	0	4.4	0	12.0	0	12.1	5.9	12.0
	SECAM	PAL	PLAY		0	2.8	0.7	5.0	2.1	2.8	0	4.8	0.1	0	0	2.4	0	12.1	0	12.1	5.9	12.1

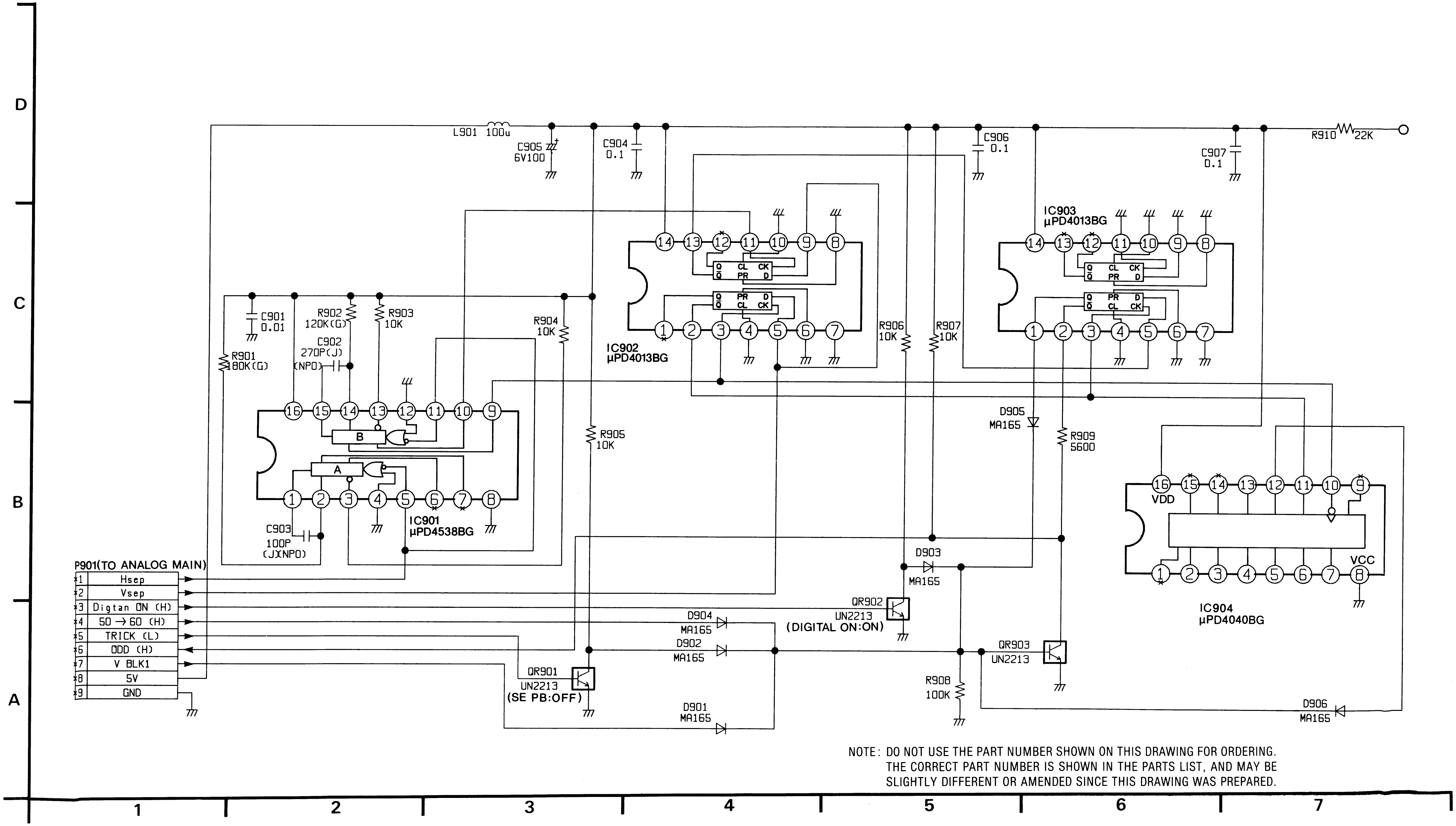
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9907			QR9908														
				PIN NO.	E	C	B	E	C	B												
NTSC		PAL	REC		0	10.4	0	12.1	5.9	12.0												
	PAL	NTSC	PLAY		0	0	4.4	12.1	12.1	0												
PAL		SECAM	REC		0	0	4.4	12.1	12.1	0												
	SECAM	PAL	PLAY		0	0	4.5	12.1	12.1	0												

ANALOGUE C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9901																			
				PIN NO.	21	22	23	24																
NTSC		PAL	REC		3.1	4.1	4.9	4.7																
	PAL	NTSC	PLAY		3.1	4.1	4.9	4.7																
PAL		SECAM	REC		3.1	4.1	4,9	4.7																
	SECAM	PAL	PLAY		0	4.1	4.9	4.7																

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9902																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		6.4	6.3	0.7	0	0	0	0	0	0.1	6.0	0.9	12.1	1.1	10.0	12.1	3.9				
	PAL	NTSC	PLAY		6.5	6.3	0.7	0	0	0	0	0	0.1	6.1	1.1	12.1	10.1	10.1	12.1	4.1				
PAL		SECAM	REC		6.4	6.3	0.7	0	0	0	0	0	0.1	6.1	0.8	12.1	1.0	10.0	12.1	3.9				
	SECAM	PAL	PLAY		6.5	6.3	0.7	0	0	0	0	0	0.1	6.1	0.8	12.1	1.0	9.9	12.1	3.9				

SUB ANALOGUE (1) SCHEMATIC DIAGRAM


D
C
B
A
1
2
3
4
5
6
7
L901 100u
C905 6V100
C904 0.1
C906 0.1
C907 0.1
R910 22K
IC903 µPD4013BG
IC902 µPD4013BG
IC901 µPD4538BG
IC904 µPD4040BG
C901 0.01
R902 120K(G)
R903 10K
C902 270P(J) (NPO)
R901 180K(G)
R904 10K
R905 10K
R906 10K
R907 10K
R909 5600
R908 100K
C903 100P (JXNPO)
D905 MA165
D903 MA165
D904 MA165
D902 MA165
D901 MA165
D906 MA165
QR902 UN2213 (DIGITAL ON:ON)
QR901 UN2213 (SE PB:OFF)
QR903 UN2213
VDD
VCC
Q
CL
CK
PR
D
A
B
P901(TO ANALOG MAIN)
1 Hsep
2 Vsep
3 Digtan ON (H)
4 50 → 60 (H)
5 TRICK (L)
6 ODD (H)
7 V BLK1
8 5V
9 GND

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
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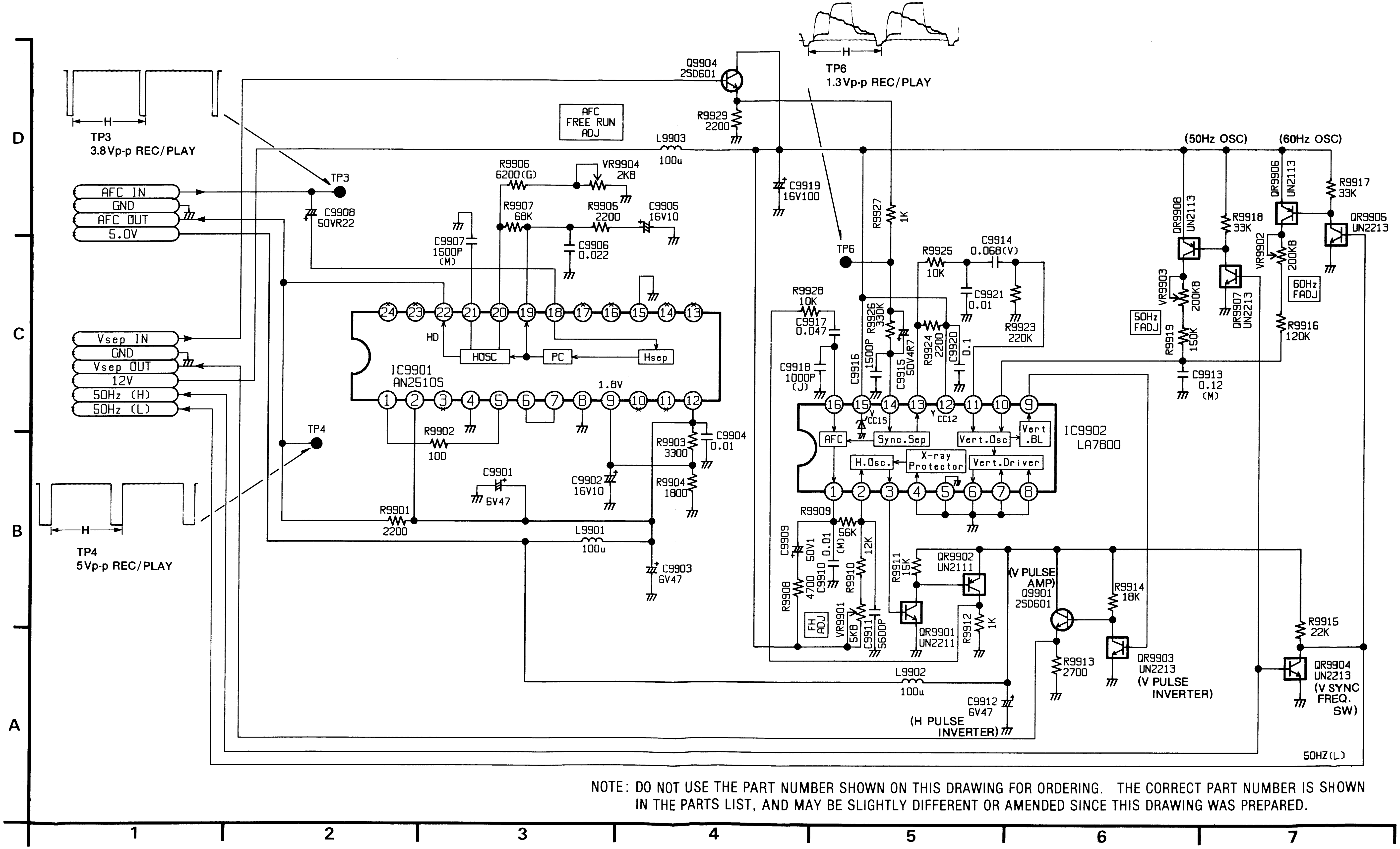
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

AFC SCHEMATIC DIAGRAM


TP3
3.8Vp-p REC/PLAY
H
TP4
5Vp-p REC/PLAY
TP6
1.3Vp-p REC/PLAY
AFC IN
GND
AFC OUT
5.0V
Vsep IN
GND
Vsep OUT
12V
50Hz (H)
50Hz (L)
AFC FREE RUN ADJ
Q9904 2SD601
R9929 2200
L9903 100u
C9919 16V100
C9908 50VR22
R9906 6200(G)
VR9904 2KB
R9907 68K
R9905 2200
C9905 16V10
C9907 1500P (M)
C9906 0.022
HD
HOSC
PC
Hsep
IC9901 AN2510S
1.8V
R9902 100
C9901 6V47
R9901 2200
R9903 3300
C9904 0.01
C9902 16V10
R9904 1800
L9901 100u
C9903 6V47
R9927 1K
R9925 10K
C9914 0.068(V)
C9921 0.01
R9923 220K
R9928 10K
C9917 0.047
C9918 1000P (J)
C9916 1500P
R9926 330K
C9915 50V4R7
R9924 2200
C9920 0.1
CC15
CC12
AFC
Sync.Sep
Vert.Osc
Vert.BL
H.Osc.
X-ray Protector
Vert.Driver
IC9902 LA7800
R9909 56K
C9909 50V1
C9910 0.01 (M)
R9908 4700
R9910 12K
FH ADJ
VR9901 5KB
C9911 5600P
R9911 15K
QR9902 UN2111
QR9901 UN2211
R9912 1K
L9902 100u
C9912 6V47
(H PULSE INVERTER)
(V PULSE AMP) Q9901 2SD601
R9913 2700
R9914 18K
QR9903 UN2213 (V PULSE INVERTER)
(50Hz OSC)
(60Hz OSC)
QR9908 UN2113
R9918 33K
VR9903 200KB
50Hz FADJ
R9919 150K
C9913 0.12 (M)
QR9907 UN2213
VR9902 200KB
QR9906 UN2113
R9917 33K
QR9905 UN2213
60Hz FADJ
R9916 120K
R9915 22K
QR9904 UN2213 (V SYNC FREQ. SW)
50HZ(L)
A
B
C
D
1
2
3
4
5
6
7

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

PAL/NTSC ENCODER SCHEMATIC DIAGRAM

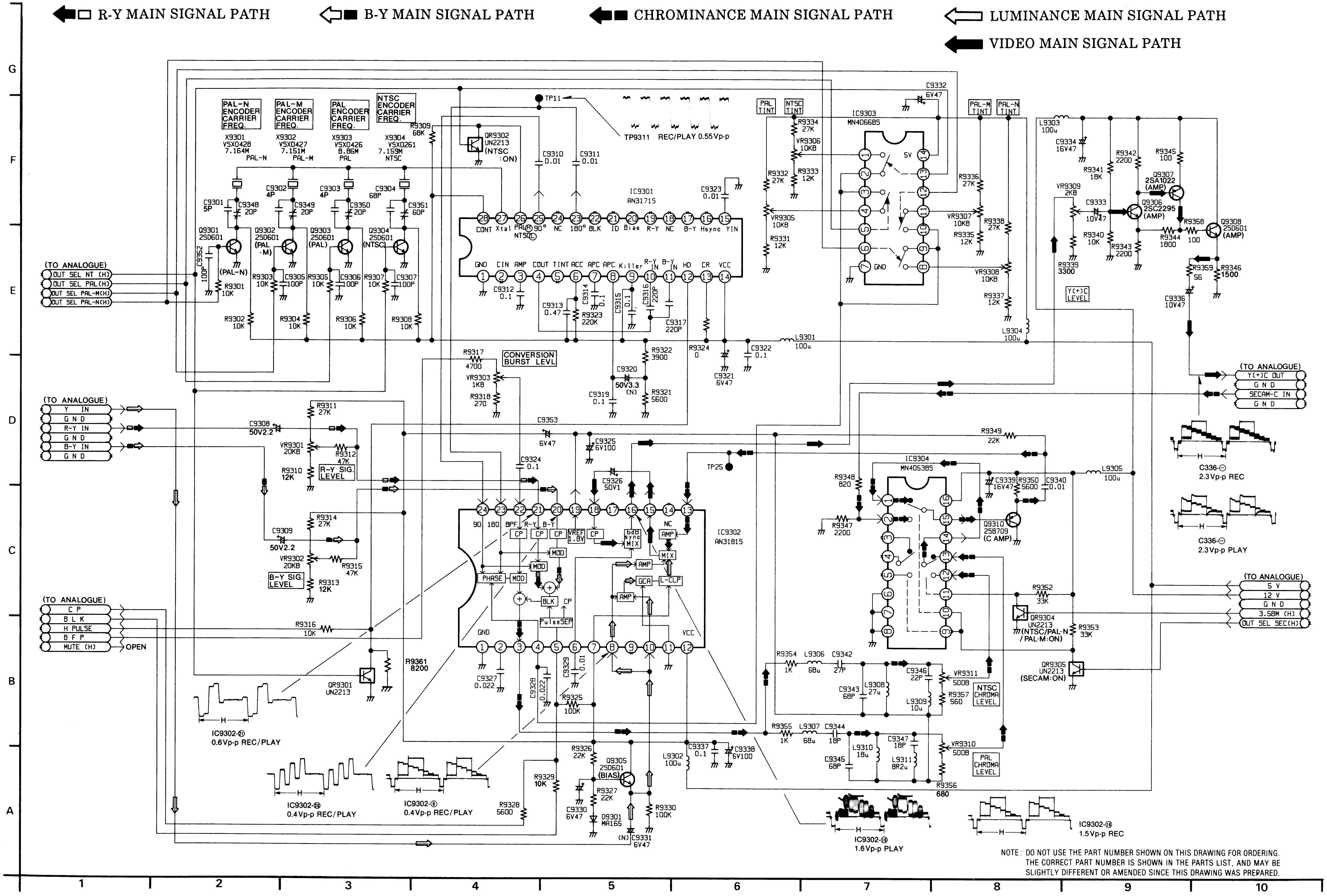
R-Y MAIN SIGNAL PATH

B-Y MAIN SIGNAL PATH

CHROMINANCE MAIN SIGNAL PATH

LUMINANCE MAIN SIGNAL PATH

VIDEO MAIN SIGNAL PATH


G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
PAL-N ENCODER CARRIER FREQ.
PAL-M ENCODER CARRIER FREQ.
PAL ENCODER CARRIER FREQ.
NTSC ENCODER CARRIER FREQ.
X9301 VSX0428 7.164M PAL-N
X9302 VSX0427 7.151M PAL-M
X9303 VSX0426 8.86M PAL
X9304 VSX0261 7.159M NTSC
Q9301 2SD601
Q9302 2SD601 (PAL-M)
Q9303 2SD601 (PAL)
Q9304 2SD601 (NTSC)
QR9302 UN2213 (NTSC:ON)
TP11
TP9311 REC/PLAY 0.55Vp-p
IC9301 AN3171S
CONT Xtal PAL90° NTSC NC 180° BLK ID Bias R-Y NC B-Y Hsync Y IN
GND CIN AMP COUT TINT ACC APC APC Killer R-Y IN B-Y IN HD CR VCC
CONVERSION BURST LEVL
PAL TINT
NTSC TINT
IC9303 MN4066BS
PAL-M TINT
PAL-N TINT
Y(+)C LEVEL
Q9307 2SA1022 (AMP)
Q9306 2SC2295 (AMP)
Q9308 2SD601 (AMP)
(TO ANALOGUE)
OUT SEL NT (H)
OUT SEL PAL(H)
OUT SEL PAL-M(H)
OUT SEL PAL-N(H)
Y IN
GND
R-Y IN
B-Y IN
R-Y SIG. LEVEL
B-Y SIG. LEVEL
CP
BLK
H PULSE
BFP
MUTE (H)
OPEN
Y(+)C OUT
SECAM-C IN
C336-⊖ 2.3Vp-p REC
C336-⊖ 2.3Vp-p PLAY
IC9302 AN3181S
PHASE MOD CP BLK PulseSEP AMP GCA L-CLP MIX
TP25
IC9304 MN4053BS
Q9310 2SB709 (C AMP)
5V
12V
3.58M (H)
OUT SEL SEC(H)
QR9304 UN2213 (NTSC/PAL-N /PAL-M:ON)
QR9305 UN2213 (SECAM:ON)
NTSC CHROMA LEVEL
PAL CHROMA LEVEL
QR9301 UN2213
Q9305 2SD601 (BIAS)
D9301 MA165
IC9302-㉑ 0.6Vp-p REC/PLAY
IC9302-㉓ 0.4Vp-p REC/PLAY
IC9302-⑧ 0.4Vp-p REC/PLAY
IC9302-⑯ 1.6Vp-p PLAY
IC9302-⑯ 1.5Vp-p REC

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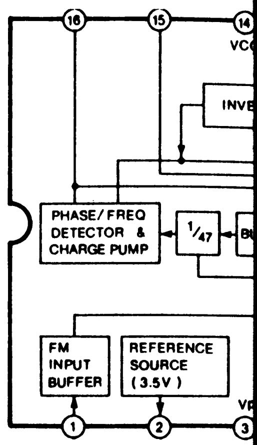
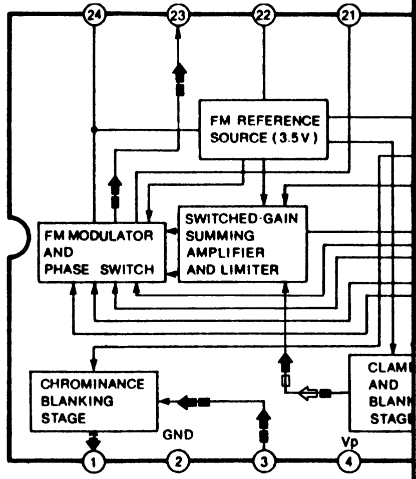
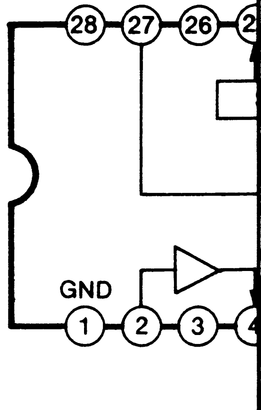
IC9402 TDA2507


PHASE/FREQ DETECTOR & CHARGE PUMP
1/47
FM INPUT BUFFER
REFERENCE SOURCE (3.5V)

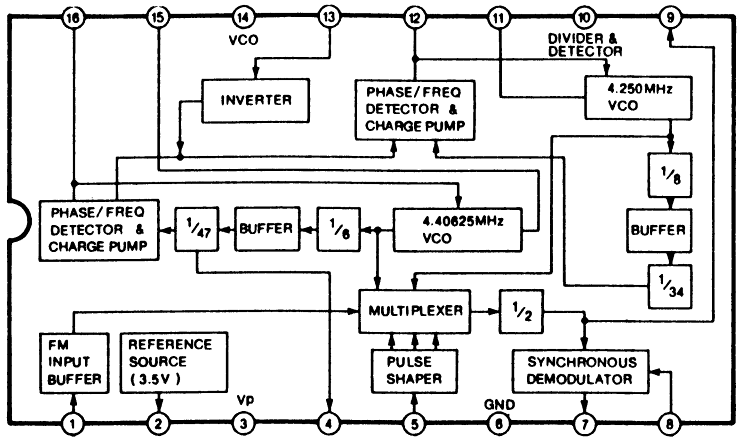
IC9403 TDA2506


FM REFERENCE SOURCE (3.5V)
FM MODULATOR AND PHASE SWITCH
SWITCHED-GAIN SUMMING AMPLIFIER AND LIMITER
CHROMINANCE BLANKING STAGE
GND

IC9301 AN3171S

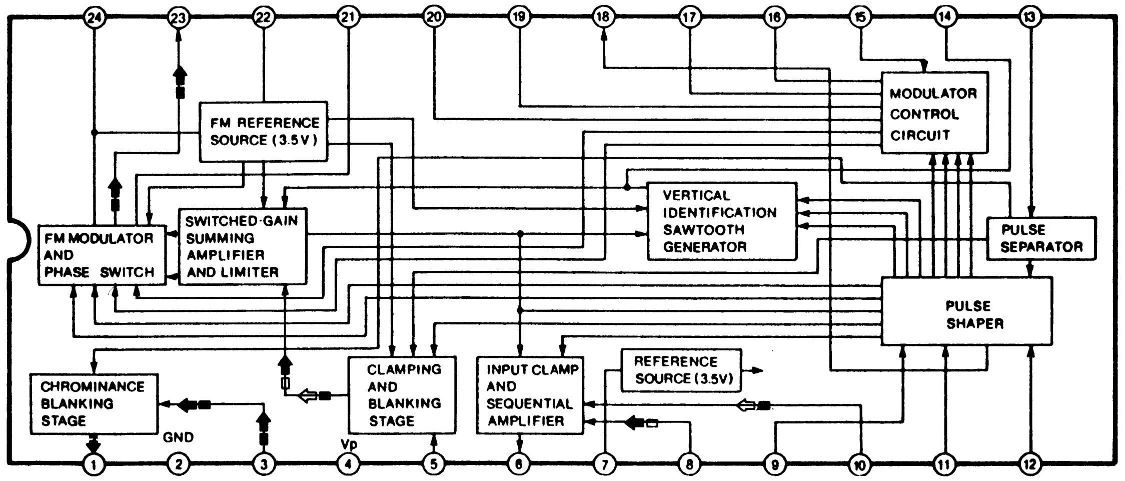


IC9402 TDA2507



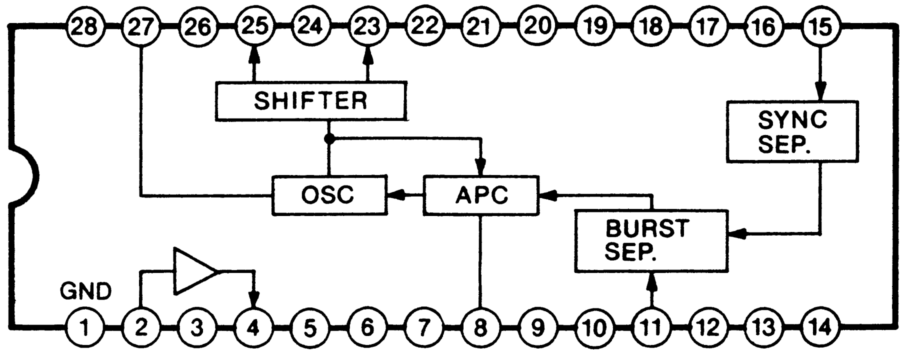
VCO
DIVIDER & DETECTOR
INVERTER
PHASE/FREQ DETECTOR & CHARGE PUMP
4.250MHz VCO
1/8
BUFFER
1/34
PHASE/FREQ DETECTOR & CHARGE PUMP
1/47
BUFFER
1/6
4.40625MHz VCO
MULTIPLEXER
1/2
FM INPUT BUFFER
REFERENCE SOURCE (3.5V)
Vp
PULSE SHAPER
SYNCHRONOUS DEMODULATOR
GND

IC9403 TDA2506



FM REFERENCE SOURCE (3.5V)
MODULATOR CONTROL CIRCUIT
FM MODULATOR AND PHASE SWITCH
SWITCHED-GAIN SUMMING AMPLIFIER AND LIMITER
VERTICAL IDENTIFICATION SAWTOOTH GENERATOR
PULSE SEPARATOR
PULSE SHAPER
CHROMINANCE BLANKING STAGE
CLAMPING AND BLANKING STAGE
INPUT CLAMP AND SEQUENTIAL AMPLIFIER
REFERENCE SOURCE (3.5V)
GND
Vp

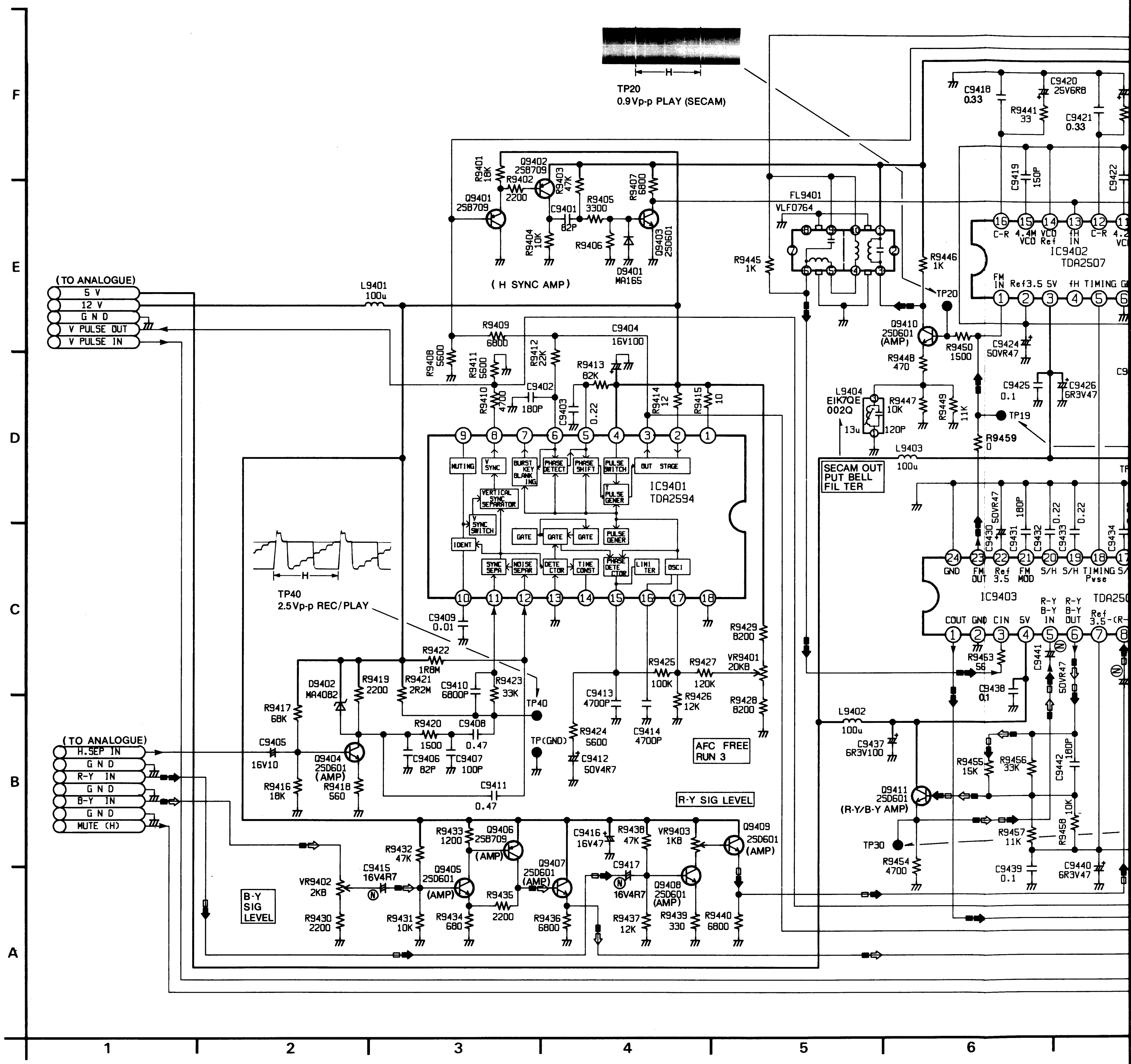
IC9301 AN3171S



SHIFTER
SYNC SEP.
OSC
APC
BURST SEP.
GND

SECAM ENCODER SCHEMATIC DIAGRAM

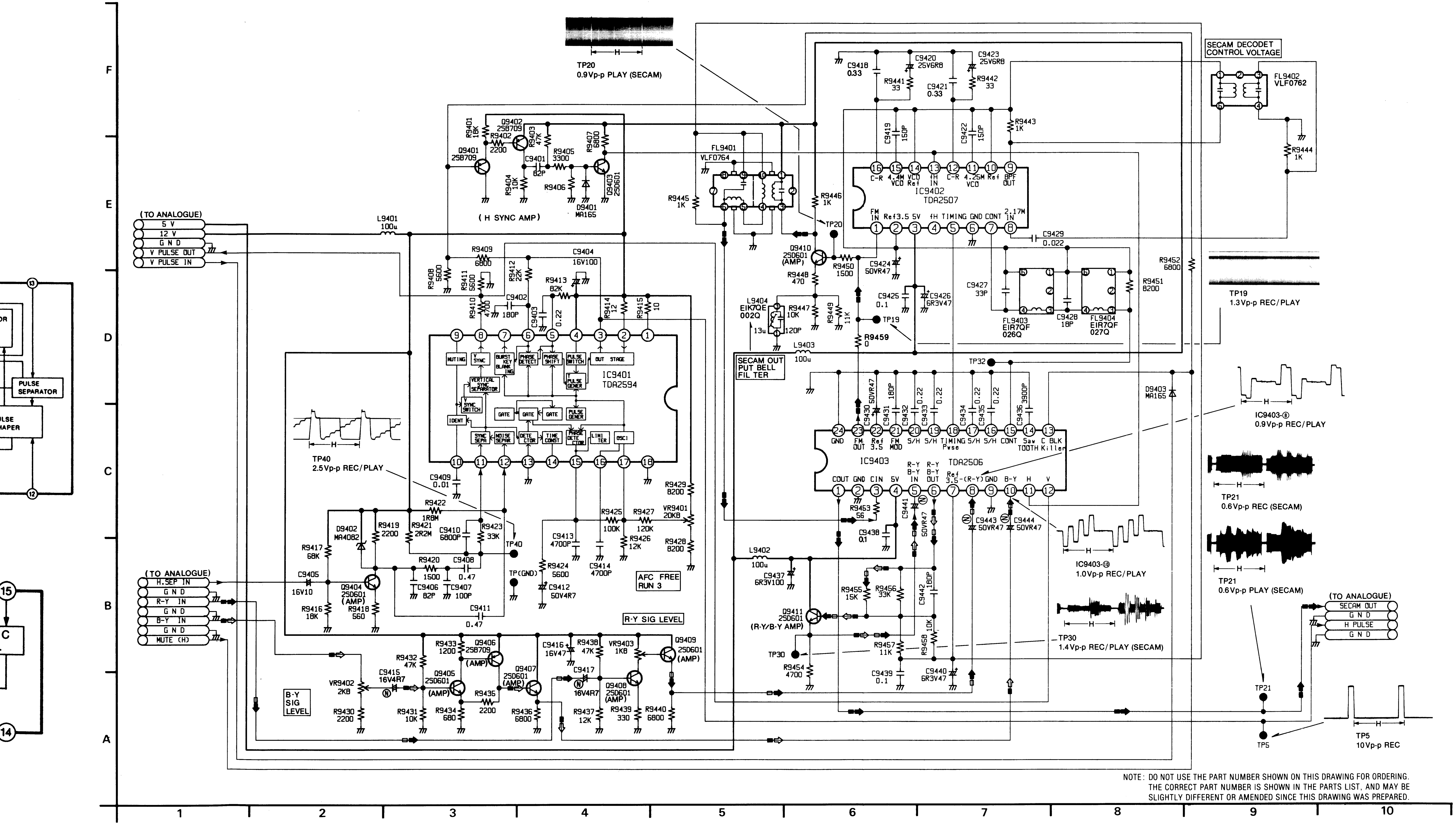
R-Y MAIN SIGNAL PATH B-Y MAIN SIGNAL PATH CHROMINAN



F
E
D
C
B
A
1
2
3
4
5
6
TP20
0.9Vp-p PLAY (SECAM)
H
(TO ANALOGUE)
5 V
12 V
G N D
V PULSE OUT
V PULSE IN
L9401
100u
R9401 18K
Q9402 2SB709
R9402 2200
Q9401 2SB709
R9403 47K
C9401 82P
R9405 3300
R9407 6800
R9404 10K
R9406
Q9403 2SD601
D9401 MA165
(H SYNC AMP)
FL9401 VLF0764
R9445 1K
R9446 1K
C9418 0.33
C9420 25V6R8
R9441 33
C9421 0.33
C9419 150P
C9422
IC9402 TDA2507
C-R 4.4M VCO
VCO Ref
fH IN
C-R 4.2
FM IN Ref3.5 5V fH TIMING
TP20
Q9410 2SD601 (AMP)
R9450 1500
R9448 470
C9424 50VR47
C9425 0.1
C9426 6R3V47
L9404 EIK7QE 002Q
R9447 10K
R9449 11K
TP19
13u
120P
R9459 0
L9403 100u
SECAM OUT PUT BELL FIL TER
R9409 6800
C9404 16V100
R9408 5600
R9411 5600
R9412 22K
R9413 82K
R9410 4700
C9402 180P
C9403
0.22
R9414 12
R9415 10
MUTING
V SYNC
BURST KEY BLANK ING
PHASE DETECT
PHASE SHIFT
PULSE SWITCH
OUT STAGE
VERTICAL SYNC SEPARATOR
PULSE GENER
SYNC SWITCH
IDENT
GATE
GATE
GATE
PULSE GENER
SYNC SEPA
NOISE SEPAR
DETE CTOR
TIME CONST
PHASE DETE CTOR
LIMI TER
OSCI
IC9401 TDA2594
C9430 50VR47
C9431 180P
C9432 0.22
C9433 0.22
C9434
GND FM OUT Ref 3.5 FM MOD S/H S/H TIMING S/ Pvse
IC9403
R-Y B-Y IN
R-Y B-Y OUT
TDA250
Ref 3.5
COUT GND CIN 5V
TP40
2.5Vp-p REC/PLAY
C9409 0.01
R9429 8200
R9422 1R8M
R9421 2R2M
R9419 2200
D9402 MA4082
C9410 6800P
R9423 33K
TP40
R9425 100K
R9427 120K
VR9401 20KB
R9426 12K
R9428 8200
C9413 4700P
R9417 68K
C9405 16V10
R9420 1500
C9408 0.47
Q9404 2SD601 (AMP)
TP(GND)
R9424 5600
C9414 4700P
C9412 50V4R7
AFC FREE RUN 3
C9406 82P
C9407 100P
R9416 18K
R9418 560
C9411 0.47
R-Y SIG LEVEL
(TO ANALOGUE)
H.SEP IN
G N D
R-Y IN
G N D
B-Y IN
G N D
MUTE (H)
R9453 56
C9438 0.1
C9441 50VR47
L9402 100u
C9437 6R3V100
Q9411 2SD601 (R-Y/B-Y AMP)
TP30
R9454 4700
R9455 15K
R9456 33K
C9442 180P
R9457 11K
R9458 10K
C9439 0.1
C9440 6R3V47
R9433 1200
Q9406 2SB709 (AMP)
R9432 47K
C9416 16V47
R9438 47K
VR9403 1KB
Q9409 2SD601 (AMP)
C9415 16V4R7
Q9405 2SD601 (AMP)
Q9407 2SD601 (AMP)
C9417 16V4R7
Q9408 2SD601 (AMP)
VR9402 2KB
B-Y SIG LEVEL
R9435 2200
R9430 2200
R9431 10K
R9434 680
R9436 6800
R9437 12K
R9439 330
R9440 6800

SECAM ENCODER SCHEMATIC DIAGRAM

◀□ R-Y MAIN SIGNAL PATH ⇦■ B-Y MAIN SIGNAL PATH ◀■ CHROMINANCE MAIN SIGNAL PATH


F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
TP20
0.9Vp-p PLAY (SECAM)
H
(H SYNC AMP)
Q9401 2SB709
Q9402 2SB709
Q9403 2SD601
D9401 MA165
R9401 18K
R9402 2200
R9403 47K
R9404 10K
R9405 3300
R9406
R9407 6800
C9401 82P
(TO ANALOGUE)
5 V
12 V
G N D
V PULSE OUT
V PULSE IN
L9401 100u
R9408 5600
R9409 6800
R9410 4700
R9411 5600
R9412 22K
R9413 82K
R9414 12
R9415 10
C9402 180P
C9403 0.22
C9404 16V100
IC9401 TDA2594
MUTING
V SYNC
BURST KEY BLANKING
PHASE DETECT
PHASE SHIFT
PULSE SWITCH
OUT STAGE
VERTICAL SYNC SEPARATOR
V SYNC SWITCH
PULSE GENER
IDENT
GATE
SYNC SEPAR
NOISE SEPAR
DETECTOR
TIME CONST
PHASE DETECTOR
LIMITER
OSC1
TP40
2.5Vp-p REC/PLAY
C9409 0.01
R9422 1R8M
R9421 2R2M
R9419 2200
R9423 33K
C9410 6800P
D9402 MA4082
R9417 68K
R9420 1500
C9408 0.47
C9406 82P
C9407 100P
Q9404 2SD601 (AMP)
R9418 560
R9416 18K
C9405 16V10
C9411 0.47
TP(GND)
C9413 4700P
R9424 5600
C9412 50V4R7
C9414 4700P
R9425 100K
R9427 120K
R9426 12K
VR9401 20KB
R9429 8200
R9428 8200
AFC FREE RUN 3
R-Y SIG LEVEL
(TO ANALOGUE)
H.SEP IN
G N D
R-Y IN
G N D
B-Y IN
G N D
MUTE (H)
B-Y SIG LEVEL
VR9402 2KB
R9430 2200
C9415 16V4R7
R9432 47K
Q9405 2SD601 (AMP)
R9431 10K
R9433 1200
Q9406 2SB709 (AMP)
R9434 680
R9435 2200
Q9407 2SD601 (AMP)
R9436 6800
C9416 16V47
R9438 47K
C9417 16V4R7
Q9408 2SD601 (AMP)
R9437 12K
VR9403 1KB
R9439 330
R9440 6800
Q9409 2SD601 (AMP)
FL9401 VLF0764
R9445 1K
R9446 1K
TP20
Q9410 2SD601 (AMP)
R9448 470
R9450 1500
C9424 50VR47
C9425 0.1
C9426 6R3V47
L9404 EIK7QE 002Q
13u
120P
R9447 10K
R9449 11K
TP19
R9459 0
L9403 100u
SECAM OUT PUT BELL FIL TER
C9418 0.33
C9420 25V6R8
R9441 33
C9421 0.33
C9423 25V6R8
R9442 33
C9419 150P
C9422 150P
R9443 1K
IC9402 TDA2507
C-R 4.4M VCO Ref
VCO Ref
fH IN
C-R 4.25M VCO
Ref
BPF OUT
FM IN
Ref 3.5
5V
fH
TIMING
GND
CONT
2.17M IN
C9429 0.022
C9427 33P
FL9403 EIR7QF 026Q
C9428 18P
FL9404 EIR7QF 027Q
R9452 6800
R9451 8200
SECAM DECODET CONTROL VOLTAGE
FL9402 VLF0762
R9444 1K
TP19
1.3Vp-p REC/PLAY
TP32
D9403 MA165
C9430 50VR47
C9431 180P
C9432 0.22
C9433 0.22
C9434 0.22
C9435 0.22
C9436 3900P
IC9403 TDA2506
GND
FM OUT
Ref 3.5
FM MOD
S/H
TIMING Pulse
CONT
Saw TOOTH
C BLK Killer
COUT
GND
CIN
5V
R-Y B-Y IN
R-Y B-Y OUT
Ref 3.5
(R-Y)
B-Y
H
V
IC9403-⑧
0.9Vp-p REC/PLAY
R9453 56
C9438 0.1
C9441
C9444 50VR47
C9443 50VR47
C9447 50VR47
L9402 100u
C9437 6R3V100
R9455 15K
R9456 33K
C9442 180P
Q9411 2SD601 (R-Y/B-Y AMP)
TP30
R9454 4700
R9457 11K
R9458 10K
C9439 0.1
C9440 6R3V47
TP21
0.6Vp-p REC (SECAM)
IC9403-⑩
1.0Vp-p REC/PLAY
TP21
0.6Vp-p PLAY (SECAM)
TP30
1.4Vp-p REC/PLAY (SECAM)
(TO ANALOGUE)
SECAM OUT
G N D
H PULSE
G N D
TP21
TP5
TP5
10Vp-p REC
PULSE SEPARATOR
PULSE SHAPER

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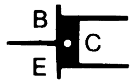
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

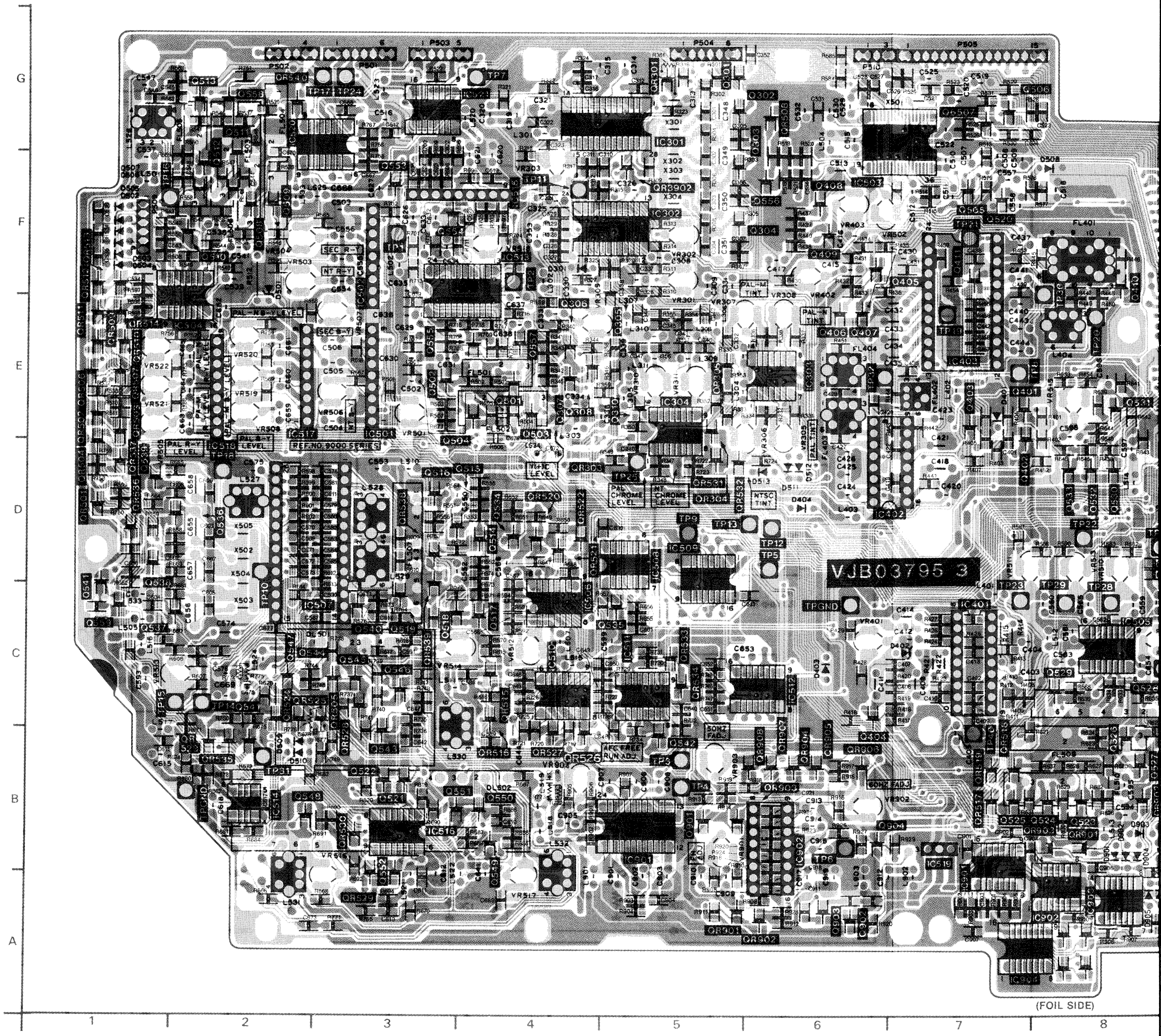
ANALOGUE C.B.A.	
Transistor	
Q9301	G-5
Q9302	G-6
Q9303	G-6
Q9304	F-6
Q9305	E-5
Q9306	E-4
Q9307	E-4
Q9308	E-4
Q9309	E-4
Q9310	E-5
Q9401	E-8
Q9402	D-7
Q9403	E-7
Q9404	B-6
Q9405	F-7
Q9406	E-6
Q9407	E-6
Q9408	F-6
Q9409	F-6
Q9410	F-8
Q9411	F-7
Q9501	E-4
Q9502	E-3
Q9503	E-4
Q9504	D-4
Q9505	F-7
Q9506	G-8
Q9507	G-7
Q9508	F-2
Q9509	F-2
Q9510	F-2
Q9511	G-2
Q9512	F-2
Q9513	G-2
Q9514	D-4
Q9515	D-4
Q9516	D-3
Q9517	C-4
Q9518	C-3
Q9519	C-3
Q9520	F-7
Q9521	B-3
Q9522	B-3
Q9523	B-8
Q9524	B-8
Q9525	B-7
Q9526	B-8
Q9527	B-8
Q9528	C-8
Q9529	C-8
Q9530	D-8
Q9531	E-8
Q9532	D-8
Q9533	D-8
Q9534	D-4
Q9535	C-5
Q9536	D-2
Q9537	C-1
Q9538	C-1
Q9539	D-1
Q9540	C-3
Q9541	C-2
Q9542	B-5
Q9543	B-3
Q9544	C-2
Q9545	C-3
Q9546	C-3
Q9547	C-2
Q9548	B-2
Q9549	A-4
Q9550	B-4
Q9551	B-4
Q9552	A-3
Q9553	F-3
Q9554	F-3
Q9555	E-3
Q9556	F-6
Q9557	E-4
Q9558	G-2
Q9559	C-1
Q9901	B-5
Q9902	A-6
Q9903	A-6
Q9904	B-7
Transistor & Resistor	
QR901	B-8
QR902	B-8
QR903	B-8
QR9301	G-5
QR9302	F-5
QR9303	D-4
QR9304	D-5
QR9305	E-5
QR9501	D-1
QR9502	E-1
QR9503	E-1
QR9504	D-1
QR9505	C-3
QR9506	E-1
QR9507	E-1
QR9508	G-6
QR9509	E-1
QR9510	E-1
QR9511	E-1
QR9512	F-1
QR9513	F-1
QR9514	E-1
QR9515	C-4
QR9516	B-4
QR9517	B-7
QR9518	B-7
QR9519	B-7
QR9520	D-4
QR9521	D-4
QR9522	D-4
QR9523	B-2
QR9524	C-2
QR9525	C-2
QR9526	B-4
QR9527	B-4
QR9528	B-3
QR9529	A-3
QR9530	B-3
QR9531	D-5
QR9532	D-5
QR9533	C-5
QR9534	C-5
QR9535	B-2
QR9536	D-1
QR9537	D-1
QR9538	D-3
QR9539	C-3
QR9540	G-2
QR9901	A-5
QR9902	A-6
QR9903	B-6
QR9904	B-6
QR9905	B-6
QR9906	B-6
QR9907	B-6
QR9908	B-6
Integrated Circuit	
IC901	A-7
IC902	A-8
IC903	A-8
IC904	A-7
IC9301	G-5
IC9302	F-5
IC9303	E-6
IC9304	E-5
IC9401	C-7
IC9402	D-7
IC9403	E-7
IC9501	E-3
IC9502	F-3
IC9503	F-6
IC9504	E-2
IC9505	C-8
IC9506	C-4
IC9507	C-3
IC9508	D-5
IC9509	D-5
IC9510	C-4
IC9511	C-5
IC9512	C-6
IC9513	F-4
IC9514	B-2
IC9515	F-4
IC9516	B-3
IC9517	E-2
IC9518	D-2
IC9519	B-7
IC9520	G-2
IC9521	G-4
IC9901	B-5
IC9902	B-6
Test Point	
TP9001	F-3
TP9002	F-4
TP9003	B-5
TP9004	B-5
TP9005	D-6
TP9006	B-6
TP9007	G-4
TP9008	E-8
TP9009	D-5
TP9010	C-2
TP9011	F-4
TP9012	D-6
TP9013	D-5
TP9014	C-2
TP9015	C-1
TP9016	F-1
TP9017	G-3
TP9018	D-2
TP9019	E-7
TP9020	E-8
TP9021	F-7
TP9022	D-8
TP9023	C-7
TP9024	G-3
TP9025	D-5
TP9026	C-8
TP9027	D-8
TP9028	C-8
TP9029	C-8
TP9030	F-8
TP9031	B-2
TP9032	E-6
TP9040	B-7
TPGND	B-2
TPGND	C-6
Adjustment	
VR9301	E-5
VR9302	F-5
VR9303	F-4
VR9305	D-6
VR9306	D-6
VR9307	E-5
VR9308	E-6
VR9309	E-5
VR9310	E-5
VR9311	E-5
VR9401	C-6
VR9402	F-6
VR9403	F-6
VR9501	E-3
VR9502	F-7
VR9503	F-2
VR9504	F-2
VR9505	D-1
VR9506	E-3
VR9507	E-3
VR9508	E-2
VR9509	C-8
VR9510	D-8
VR9511	D-7
VR9512	C-4
VR9513	C-1
VR9514	C-3
VR9515	E-8
VR9516	B-3
VR9517	A-4
VR9518	F-4
VR9519	E-2
VR9520	E-2
VR9521	E-1
VR9522	E-1
VR9530	D-8
VR9901	B-5
VR9902	B-7
VR9903	B-5
VR9904	B-4
Connector	
P901	B-8
P9501	G-3
P9502	G-2
P9503	G-3
P9504	G-5
P9505	G-7
P9506	F-8
P9507	D-8
P9508	E-8
P9509	F-1
P9510	G-6

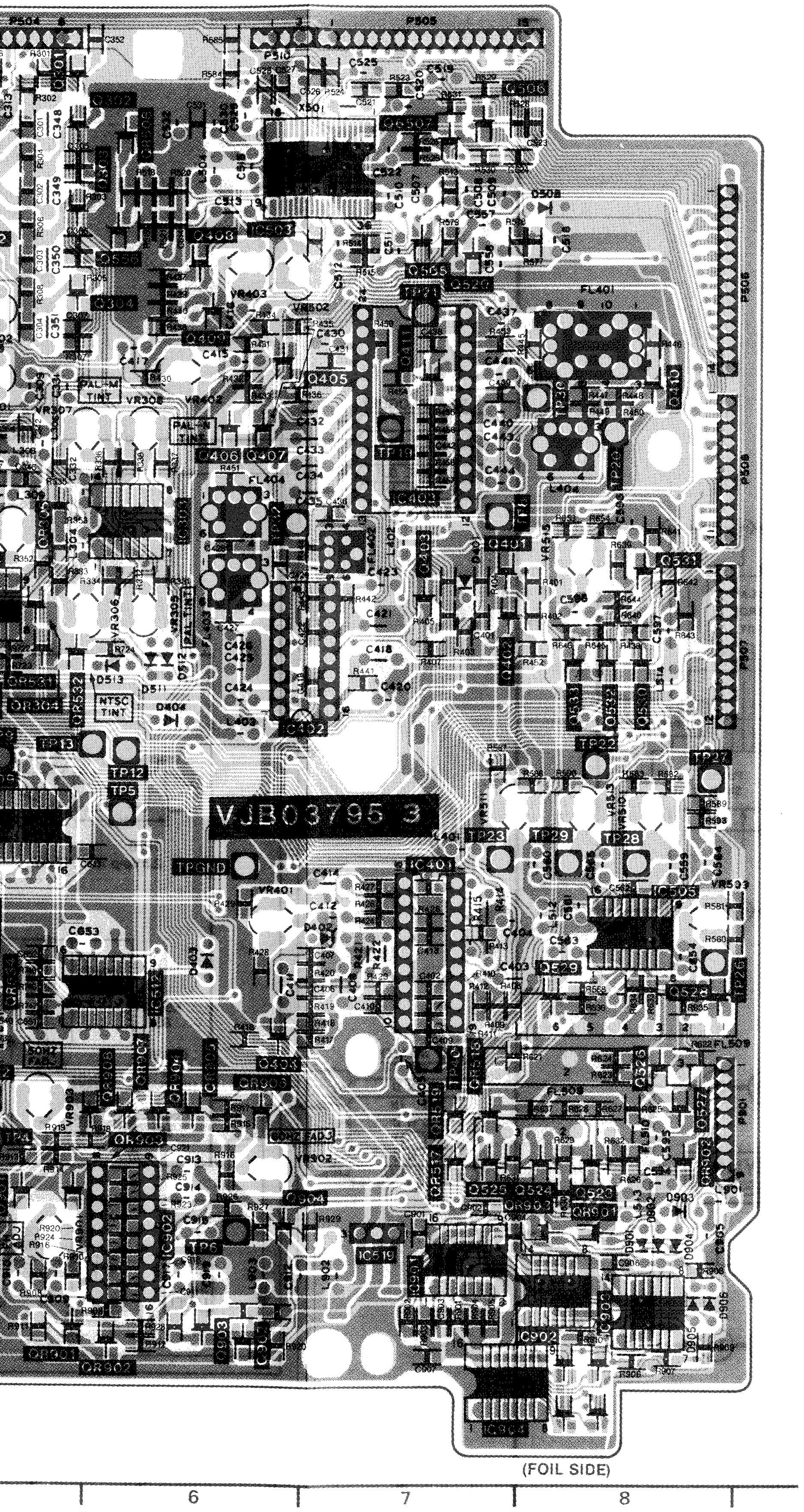
ADDRESS INFORMATION

TRANSISTOR INFORMATION



ANALOGUE C.B.A. (VEP03795A)




VJB03795 3
P504
P505
P506
P508
P507
P509
FL401
FL402
FL404
IC401
IC402
IC403
IC501
IC502
IC503
IC505
IC519
IC902
IC903
IC904
TP5
TP12
TP13
TP22
TP23
TP27
TP28
TP29
TP GND
VR401
VR402
VR403
VR305
VR306
VR307
VR308
VR309
NTSC TINT
PAL-M TINT
PAL TINT
D404
D511
D513
6
7
8

(FOIL SIDE)

ANALOGUE SCHEMATIC DIAGRAM (1/2)

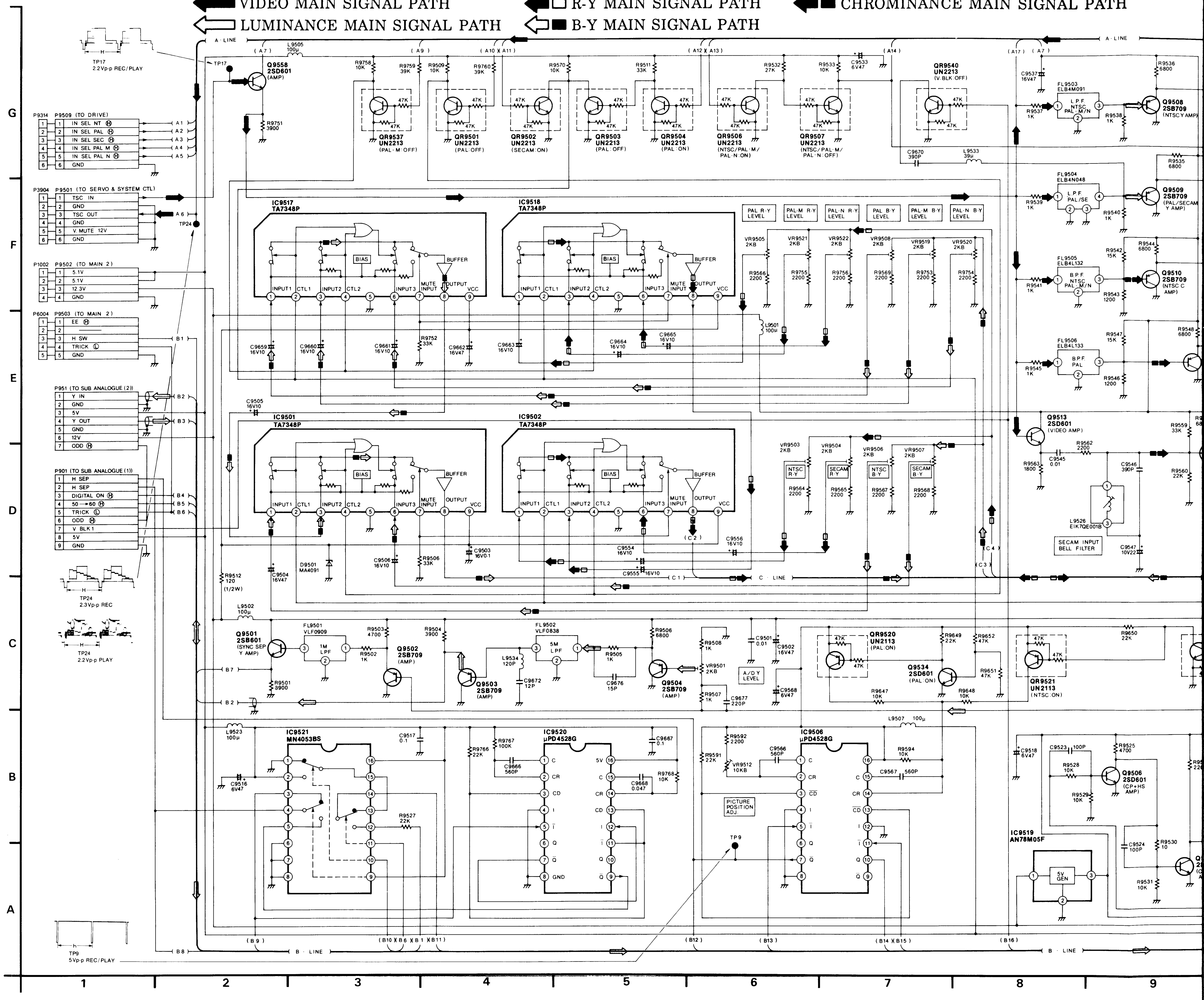
◀■ VIDEO MAIN SIGNAL PATH

◁ LUMINANCE MAIN SIGNAL PATH

◀□ R-Y MAIN SIGNAL PATH

◁■ B-Y MAIN SIGNAL PATH

◀■ CHROMINANCE MAIN SIGNAL PATH


A · LINE
B · LINE
C · LINE
TP17
2.2Vp-p REC/PLAY
TP24
2.3Vp-p REC
2.2Vp-p PLAY
TP9
5Vp-p REC/PLAY
P9314 P9509 (TO DRIVE)
IN SEL NT Ⓗ
IN SEL PAL Ⓗ
IN SEL SEC Ⓗ
IN SEL PAL M Ⓗ
IN SEL PAL N Ⓗ
GND
P3904 P9501 (TO SERVO & SYSTEM CTL)
TSC IN
GND
TSC OUT
GND
V.MUTE 12V
GND
P1002 P9502 (TO MAIN 2)
5.1V
5.1V
12.3V
GND
P6004 P9503 (TO MAIN 2)
EE Ⓗ
H SW
TRICK Ⓛ
GND
P951 (TO SUB ANALOGUE (2))
Y IN
GND
5V
Y OUT
GND
12V
ODD Ⓗ
P901 (TO SUB ANALOGUE (1))
H SEP
H SEP
DIGITAL ON Ⓗ
50 → 60 Ⓗ
TRICK Ⓛ
ODD Ⓗ
V BLK 1
5V
GND
Q9558 2SD601 (AMP)
QR9537 UN2213 (PAL·M·OFF)
QR9501 UN2213 (PAL·OFF)
QR9502 UN2213 (SECAM·ON)
QR9503 UN2213 (PAL·OFF)
QR9504 UN2213 (PAL·ON)
QR9506 UN2213 (NTSC/PAL·M/PAL·N·ON)
QR9507 UN2213 (NTSC/PAL·M/PAL·N·OFF)
QR9540 UN2213 (V·BLK·OFF)
IC9517 TA7348P
IC9518 TA7348P
IC9501 TA7348P
IC9502 TA7348P
INPUT1 CTL1 INPUT2 CTL2 INPUT3 MUTE INPUT OUTPUT VCC
BIAS
BUFFER
PAL R·Y LEVEL
PAL·M R·Y LEVEL
PAL·N R·Y LEVEL
PAL B·Y LEVEL
PAL·M B·Y LEVEL
PAL·N B·Y LEVEL
NTSC R·Y
SECAM R·Y
NTSC B·Y
SECAM B·Y
FL9503 ELB4M091 L.P.F NTSC PAL·M/N
FL9504 ELB4N048 L.P.F PAL/SE
FL9505 ELB4L132 B.P.F NTSC PAL·M/N
FL9506 ELB4L133 B.P.F PAL
Q9508 2SB709 (NTSC Y AMP)
Q9509 2SB709 (PAL/SECAM Y AMP)
Q9510 2SB709 (NTSC C AMP)
Q9513 2SD601 (VIDEO AMP)
L9526 EIK7QE001B
SECAM INPUT BELL FILTER
D9501 MA4091
Q9501 2SB601 (SYNC SEP Y AMP)
FL9501 VLF0909 1M LPF
Q9502 2SB709 (AMP)
FL9502 VLF0838 5M LPF
Q9503 2SB709 (AMP)
Q9504 2SB709 (AMP)
A/D/Y LEVEL
QR9520 UN2113 (PAL·ON)
Q9534 2SD601 (PAL·ON)
QR9521 UN2113 (NTSC·ON)
IC9521 MN4053BS
IC9520 μPD4528G
IC9506 μPD4528G
PICTURE POSITION ADJ.
Q9506 2SD601 (CP+HS AMP)
IC9519 AN78M05F
5V GEN
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9

MATIC DIAGRAM (1/2)

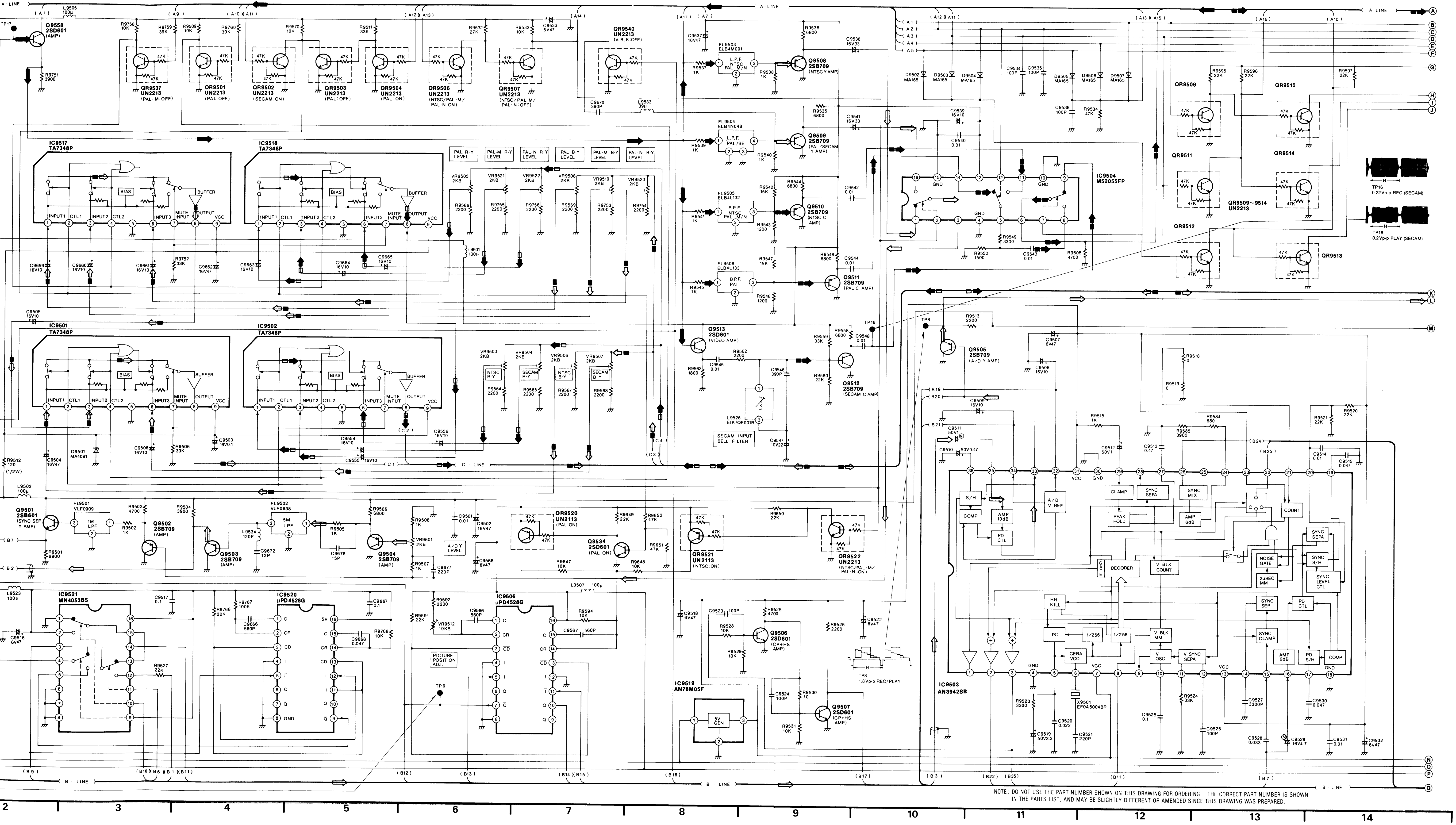
VIDEO MAIN SIGNAL PATH

LUMINANCE MAIN SIGNAL PATH

R-Y MAIN SIGNAL PATH

B-Y MAIN SIGNAL PATH

CHROMINANCE MAIN SIGNAL PATH


A-LINE
B-LINE
C-LINE
Q9558 2SD601 (AMP)
QR9537 UN2213 (PAL-M:OFF)
QR9501 UN2213 (PAL:OFF)
QR9502 UN2213 (SECAM:ON)
QR9503 UN2213 (PAL:OFF)
QR9504 UN2213 (PAL:ON)
QR9506 UN2213 (NTSC/PAL-M/PAL-N:ON)
QR9507 UN2213 (NTSC/PAL-M/PAL-N:OFF)
QR9540 UN2213 (V.BLK:OFF)
IC9517 TA7348P
IC9518 TA7348P
IC9501 TA7348P
IC9502 TA7348P
INPUT1
CTL1
INPUT2
CTL2
INPUT3
MUTE INPUT
OUTPUT
VCC
BIAS
BUFFER
PAL R-Y LEVEL
PAL-M R-Y LEVEL
PAL-N R-Y LEVEL
PAL B-Y LEVEL
PAL-M B-Y LEVEL
PAL-N B-Y LEVEL
NTSC R-Y
SECAM R-Y
NTSC B-Y
SECAM B-Y
FL9503 ELB4M091
L.P.F. NTSC PAL-M/N
Q9508 2SB709 (NTSC Y AMP)
FL9504 ELB4N048
L.P.F. PAL/SE
Q9509 2SB709 (PAL/SECAM Y AMP)
FL9505 ELB4L132
B.P.F. NTSC PAL-M/N
Q9510 2SB709 (NTSC C AMP)
FL9506 ELB4L133
B.P.F. PAL
Q9511 2SB709 (PAL C AMP)
Q9513 2SD601 (VIDEO AMP)
Q9512 2SB709 (SECAM C AMP)
L9526 EIK7QE001B
SECAM INPUT BELL FILTER
IC9504 M52055FP
GND
QR9509
QR9510
QR9511
QR9514
QR9512
QR9513
QR9509~9514 UN2213
TP16 0.22Vp-p REC (SECAM)
TP16 0.2Vp-p PLAY (SECAM)
TP8
TP16
Q9505 2SB709 (A/D Y AMP)
D9501 MA4091
Q9501 2SB601 (SYNC SEP Y AMP)
FL9501 VLF0909
1M LPF
Q9502 2SB709 (AMP)
FL9502 VLF0838
5M LPF
Q9503 2SB709 (AMP)
Q9504 2SB709 (AMP)
A/D Y LEVEL
QR9520 UN2113 (PAL:ON)
Q9534 2SD601 (PAL:ON)
QR9521 UN2113 (NTSC:ON)
QR9522 UN2213 (NTSC/PAL-M/PAL-N:ON)
IC9521 MN4053BS
IC9520 μPD4528G
IC9506 μPD4528G
PICTURE POSITION ADJ.
TP9
IC9519 AN78M05F
5V GEN
Q9506 2SD601 (CP+HS AMP)
Q9507 2SD601 (CP+HS AMP)
TP8 1.8Vp-p REC/PLAY
IC9503 AN3942SB
S/H
COMP
AMP 10dB
PD CTL
A/D V REF
CLAMP
SYNC SEPA
SYNC MIX
PEAK HOLD
AMP 6dB
COUNT
DECODER
V BLK COUNT
NOISE GATE
2μSEC MM
SYNC SEPA
SYNC S/H
SYNC LEVEL CTL
HH KILL
PC
1/256
CERA VCO
V BLK MM
V OSC
V SYNC SEPA
SYNC SEP
PD CTL
SYNC CLAMP
PD S/H
X9501 EF0A5004BR
2
3
4
5
6
7
8
9
10
11
12
13
14

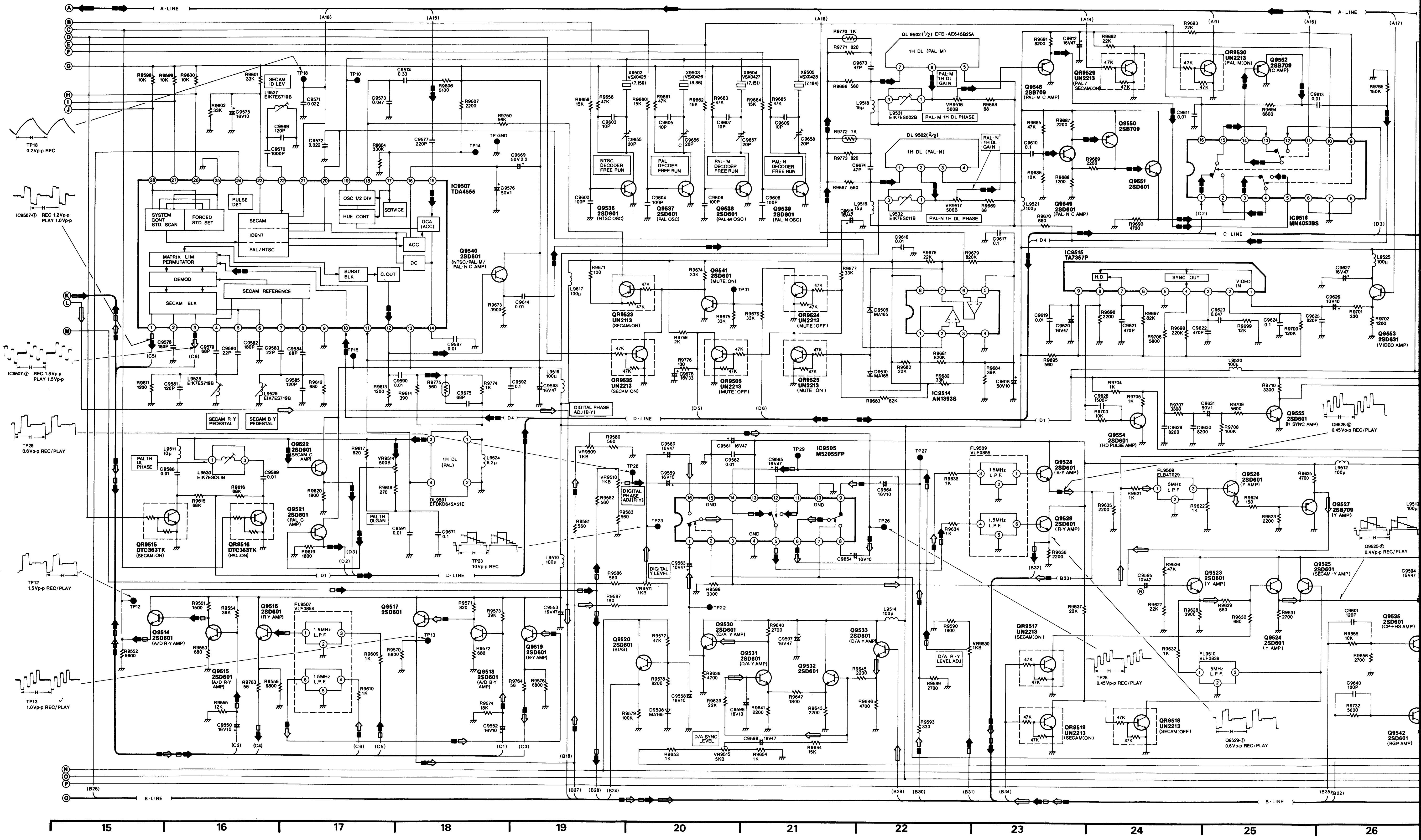
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

ANALOGUE SCHEMATIC DIAGRAM (2/2)

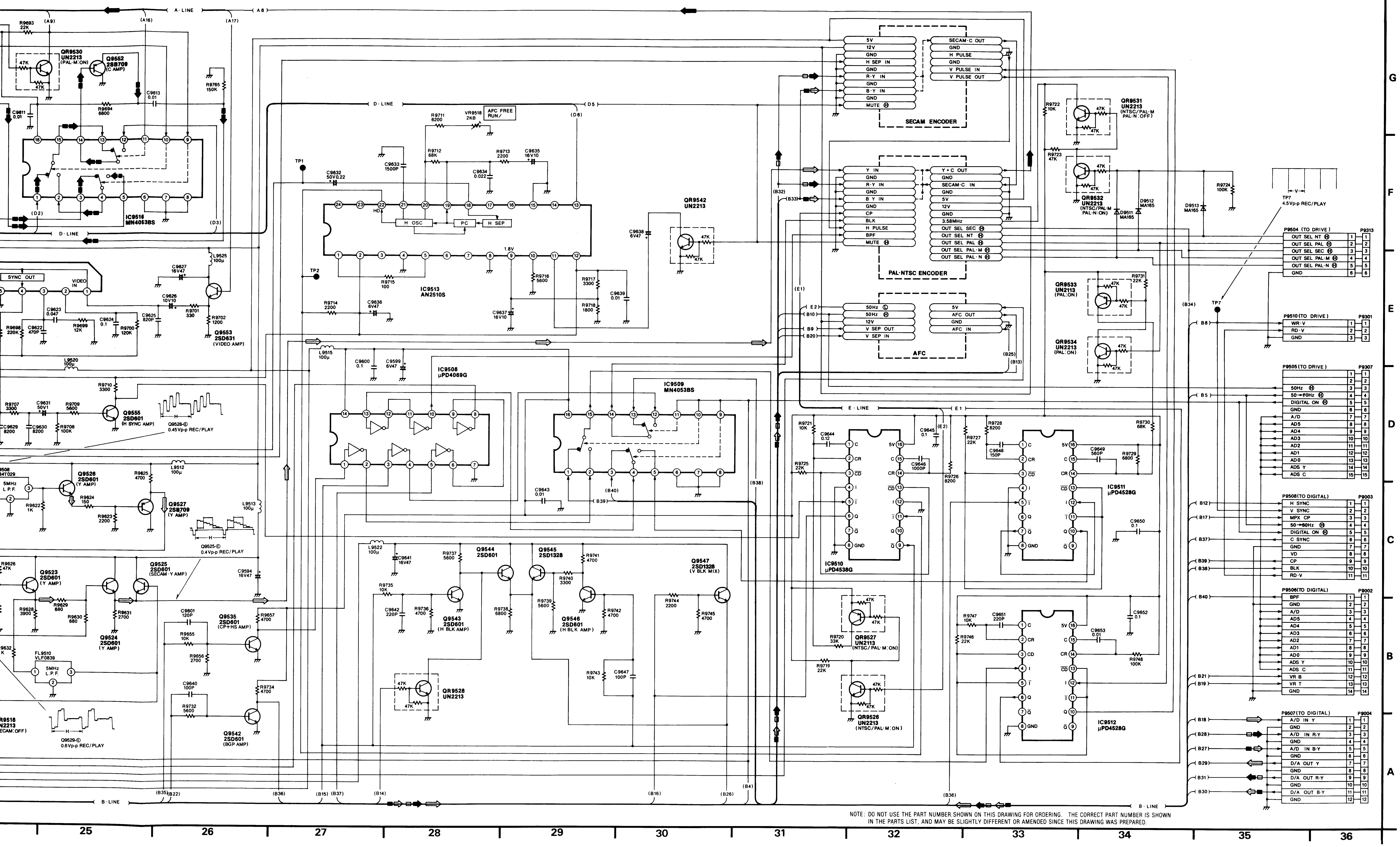
VIDEO MAIN SIGNAL PATH

LUMINANCE MAIN SIGNAL PATH

CHROMINANCE MAIN SIGNAL PATH


A · LINE
D · LINE
B · LINE
IC9507 TDA4555
SYSTEM CONT STD. SCAN
FORCED STD. SET
PULSE DET
SECAM
IDENT
PAL/NTSC
OSC 1/2 DIV
HUE CONT
SERVICE
GCA (ACC)
ACC
DC
MATRIX LIM PERMUTATOR
DEMOD
SECAM BLK
SECAM REFERENCE
BURST BLK
C. OUT
SECAM ID LEV
Q9540 2SD601 (NTSC/PAL-M/PAL-N C AMP)
NTSC DECODER FREE RUN
PAL DECODER FREE RUN
PAL-M DECODER FREE RUN
PAL-N DECODER FREE RUN
Q9536 2SD601 (NTSC OSC)
Q9537 2SD601 (PAL OSC)
Q9538 2SD601 (PAL-M OSC)
Q9539 2SD601 (PAL-N OSC)
DL 9502 (1/2) EFD-AE645B25A
1H DL (PAL-M)
PAL-M 1H DL GAIN
PAL-M 1H DL PHASE
DL 9502 (2/2)
1H DL (PAL-N)
PAL-N 1H DL GAIN
PAL-N 1H DL PHASE
Q9548 2SB709 (PAL-M C AMP)
QR9529 UN2213 (PAL/SECAM:ON)
Q9550 2SB709
Q9551 2SD601
Q9549 2SD601 (PAL-N C AMP)
QR9530 UN2213 (PAL-M:ON)
Q9552 2SB709 (C AMP)
IC9516 MN4053BS
IC9515 TA7357P
H.D.
SYNC OUT
VIDEO IN
Q9553 2SD631 (VIDEO AMP)
QR9523 UN2113 (SECAM:ON)
Q9541 2SD601 (MUTE:ON)
QR9524 UN2213 (MUTE:OFF)
QR9535 UN2213 (SECAM:ON)
QR9505 UN2213 (MUTE:OFF)
QR9525 UN2213 (MUTE:ON)
IC9514 AN1393S
Q9554 2SD601 (HD PULSE AMP)
Q9555 2SD601 (H SYNC AMP)
Q9528-① 0.45Vp-p REC/PLAY
DIGITAL PHASE ADJ (B-Y)
SECAM R-Y PEDESTAL
SECAM B-Y PEDESTAL
PAL 1H DL PHASE
Q9522 2SD601 (SECAM C AMP)
Q9521 2SD601 (PAL C AMP)
1H DL (PAL)
DL9501 EFDKD645A51E
PAL 1H DLGAN
TP23 10Vp-p REC
QR9515 DTC363TK (SECAM:ON)
QR9516 DTC363TK (PAL:ON)
IC9505 M52055FP
DIGITAL PHASE ADJ (R-Y)
DIGITAL Y LEVEL
FL9509 VLF0855
1.5MHz L.P.F.
Q9528 2SD601 (B-Y AMP)
Q9529 2SD601 (R-Y AMP)
FL9508 ELB47029
5MHz L.P.F.
Q9526 2SD601 (Y AMP)
Q9527 2SB709 (Y AMP)
Q9525-① 0.4Vp-p REC/PLAY
Q9523 2SD601 (Y AMP)
Q9525 2SD601 (SECAM-Y AMP)
Q9524 2SD601 (Y AMP)
Q9535 2SD601 (CP+HS AMP)
Q9542 2SD601 (BGP AMP)
Q9514 2SD601 (A/D R-Y AMP)
Q9515 2SD601 (A/D R-Y AMP)
Q9516 2SD601 (R-Y AMP)
FL9507 VLF0854
Q9517 2SD601
Q9518 2SD601 (A/D B-Y AMP)
Q9519 2SD601 (B-Y AMP)
Q9520 2SD601 (BIAS)
Q9530 2SD601 (D/A Y AMP)
Q9531 2SD601 (D/A Y AMP)
Q9532 2SD601
Q9533 2SD601 (D/A Y AMP)
D/A SYNC LEVEL
D/A R-Y LEVEL ADJ
QR9517 UN2213 (SECAM:ON)
QR9519 UN2213 (SECAM:ON)
QR9518 UN2213 (SECAM:OFF)
FL9510 VLF0839
TP26 0.45Vp-p REC/PLAY
Q9529-① 0.6Vp-p REC/PLAY
TP18 0.2Vp-p REC
IC9507-① REC 1.2Vp-p PLAY 1.0Vp-p
IC9507-⑤ REC 1.8Vp-p PLAY 1.5Vp-p
TP28 0.6Vp-p REC/PLAY
TP12 1.5Vp-p REC/PLAY
TP13 1.0Vp-p REC/PLAY
15
16
17
18
19
20
21
22
23
24
25
26

HROMINANCE MAIN SIGNAL PATH ◀■□ R-Y MAIN SIGNAL PATH ⇦■ B-Y MAIN SIGNAL PATH



A · LINE
D · LINE
E · LINE
B · LINE
QR9530 UN2213 (PAL·M:ON)
Q9552 2SB709 (C AMP)
IC9516 MN4053BS
Q9553 2SC631 (VIDEO AMP)
SYNC OUT
VIDEO IN
Q9555 2SD601 (H SYNC AMP)
Q9528-① 0.45Vp-p REC/PLAY
Q9526 2SD601 (Y AMP)
Q9527 2SB709 (Y AMP)
Q9525-① 0.4Vp-p REC/PLAY
Q9523 2SD601 (Y AMP)
Q9525 2SD601 (SECAM·Y AMP)
Q9524 2SD601 (Y AMP)
FL9510 VLF0839
5MHz L.P.F.
Q9529-① 0.6Vp-p REC/PLAY
Q9535 2SD601 (CP+HS AMP)
Q9542 2SD601 (BGP AMP)
TP1
TP2
IC9513 AN2510S
H OSC
PC
H SEP
VR9518 2KB
AFC FREE RUN
QR9542 UN2213
IC9508 μPD4069G
IC9509 MN4053BS
Q9544 2SD601
Q9545 2SD1328
Q9543 2SD601 (H BLK AMP)
Q9546 2SD601 (H BLK AMP)
Q9547 2SD1328 (V BLK MIX)
QR9528 UN2213
SECAM ENCODER
5V
12V
GND
H SEP IN
R-Y IN
B-Y IN
MUTE
SECAM·C OUT
H PULSE
V PULSE IN
V PULSE OUT
PAL·NTSC ENCODER
Y IN
Y+C OUT
SECAM·C IN
CP
BLK
BPF
3.58MHz
OUT SEL SEC
OUT SEL NT
OUT SEL PAL
OUT SEL PAL·M
OUT SEL PAL·N
AFC
50Hz
V SEP OUT
V SEP IN
AFC OUT
AFC IN
QR9531 UN2213 (NTSC/PAL·M PAL·N:OFF)
QR9532 UN2213 (NTSC/PAL·M PAL·N:ON)
D9511 MA165
D9512 MA165
D9513 MA165
QR9533 UN2113 (PAL:ON)
QR9534 UN2213 (PAL:ON)
TP7 4.5Vp-p REC/PLAY
TP7
IC9510 μPD4538G
IC9511 μPD4528G
IC9512 μPD4528G
QR9527 UN2113 (NTSC/PAL·M:ON)
QR9526 UN2213 (NTSC/PAL·M:ON)
P9504 (TO DRIVE) P9313
P9510 (TO DRIVE) P9301
WR·V
RD·V
P9505 (TO DRIVE) P9307
50Hz
50→60Hz
DIGITAL ON
A/D
AD5
AD4
AD3
AD2
AD1
AD0
ADS Y
ADS C
P9508 (TO DIGITAL) P9003
H SYNC
V SYNC
MPX CP
C SYNC
VD
RD·V
P9506 (TO DIGITAL) P9002
VR B
VR T
P9507 (TO DIGITAL) P9004
A/D IN Y
A/D IN R·Y
A/D IN B·Y
D/A OUT Y
D/A OUT R·Y
D/A OUT B·Y
G
F
E
D
C
B
A
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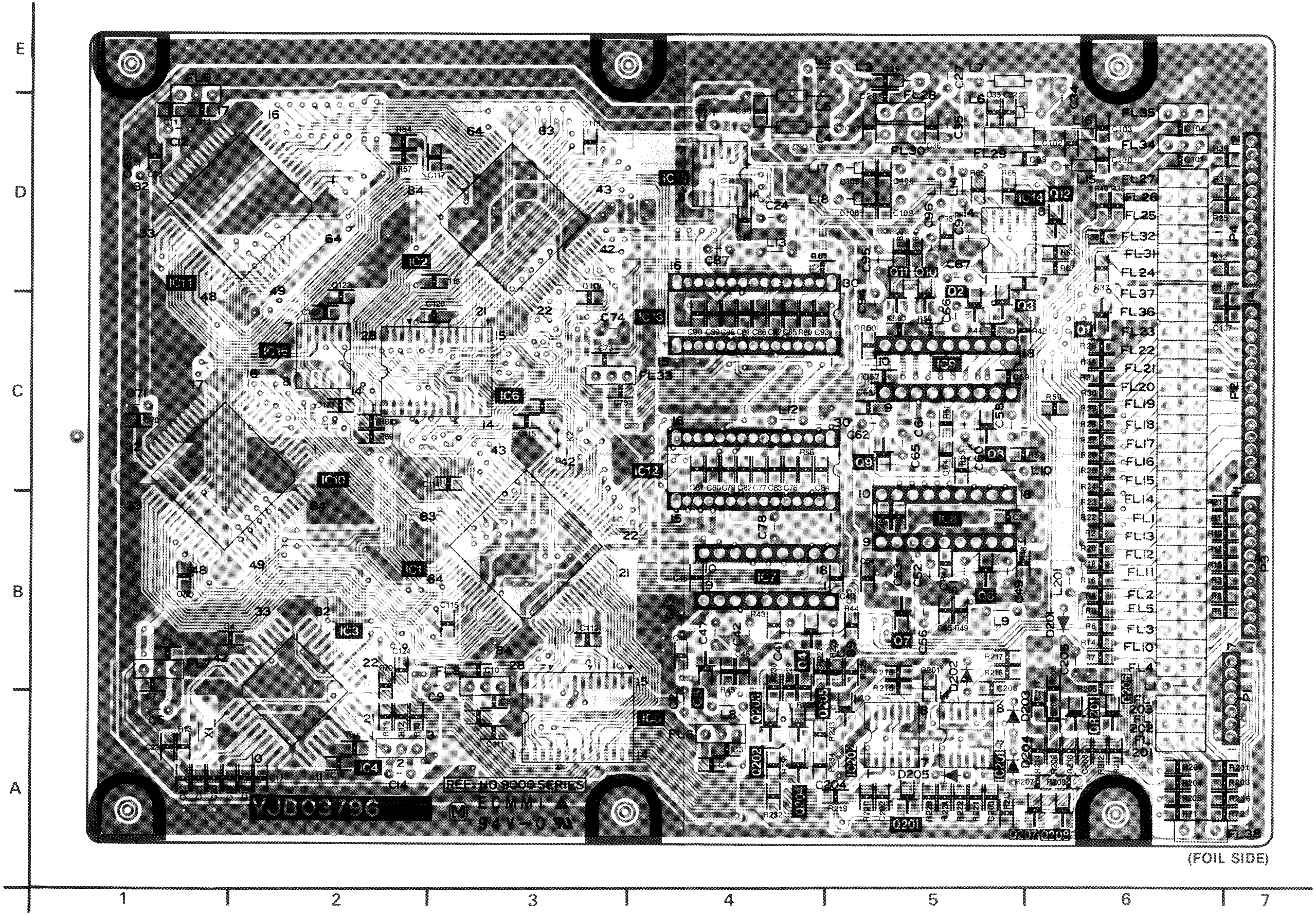
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DIGITAL C.B.A. (VEP03796A)


E
D
C
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A
1
2
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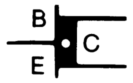
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC11
IC12
IC13
IC14
IC15
IC16
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q201
Q202
Q203
Q204
Q205
Q206
Q207
Q208
QR201
P1
P2
P3
P4
VJB03796
REF. NO 9000 SERIES
ECMMI
94V-0
(FOIL SIDE)

DIGITAL C.B.A.	
Transistor	
Q9001	C-6
Q9002	C-5
Q9003	C-5
Q9004	B-4
Q9005	A-4
Q9006	B-5
Q9007	B-5
Q9008	C-5
Q9009	C-5
Q9010	D-5
Q9011	D-5
Q9012	D-6
Q9201	A-5
Q9202	A-4
Q9203	A-4
Q9204	A-4
Q9205	A-4
Q9206	A-6
Q9207	A-6
Q9208	A-6
Transistor & Resistor	
QR9201	A-6
Integrated Circuit	
IC9001	B-2
IC9002	D-2
IC9003	B-2
IC9004	A-2
IC9005	A-4
IC9006	C-3
IC9007	B-4
IC9008	B-5
IC9009	C-5
IC9010	C-2
IC9011	D-1
IC9012	C-4
IC9013	C-4
IC9014	D-5
IC9015	D-4
IC9016	C-2
IC9201	A-5
IC9202	A-5
Connector	
P9001	A-7
P9002	C-7
P9003	B-7
P9004	D-7

ADDRESS INFORMATION

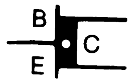
TRANSISTOR INFORMATION



DIGITAL C.B.A.	
Transistor	
Q9001	C-6
Q9002	C-5
Q9003	C-5
Q9004	B-4
Q9005	A-4
Q9006	B-5
Q9007	B-5
Q9008	C-5
Q9009	C-5
Q9010	D-5
Q9011	D-5
Q9012	D-6
Q9201	A-5
Q9202	A-4
Q9203	A-4
Q9204	A-4
Q9205	A-4
Q9206	A-6
Q9207	A-6
Q9208	A-6
Transistor & Resistor	
QR9201	A-6
Integrated Circuit	
IC9001	B-2
IC9002	D-2
IC9003	B-2
IC9004	A-2
IC9005	A-4
IC9006	C-3
IC9007	B-4
IC9008	B-5
IC9009	C-5
IC9010	C-2
IC9011	D-1
IC9012	C-4
IC9013	C-4
IC9014	D-5
IC9015	D-4
IC9016	C-2
IC9201	A-5
IC9202	A-5
Connector	
P9001	A-7
P9002	C-7
P9003	B-7
P9004	D-7

ADDRESS INFORMATION

TRANSISTOR INFORMATION



DIGITAL C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9001																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC	−0.1	0.2	0.1	0.1	0.1	0.2	0	0.1	0.1	0.2	0.1	−0.1	0	0.1	0.1	0.1	0.1	0.1	0	0.1
	PAL	NTSC	PLAY	−0.1	0.2	0.1	0.1	0.1	0	−0.1	−0.2	0.1	0.2	0.1	−0.1	0.1	0.1	0	0	0.1	0	0.1	0.1
PAL		SECAM	REC	0	0.1	0	0.1	0.1	0	0	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0
	SECAM	PAL	PLAY	0	0	0	0.1	0.1	0	0	0	0	0.1	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9001																			
			MODE PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	REC	0	0.1	0.1	0	0.1	0.1	0	0	0.1	0.2	−0.1	0.2	−0.1	0.2	0.2	0.2	0	0.2	−0.1	−0.1
	PAL	NTSC	PLAY	0	0.1	0.1	0	−0.1	0	0.1	0.1	0	0.2	−0.2	0.2	0.1	0.2	0.2	0.2	−0.1	0.2	−0.1	−0.1
PAL		SECAM	REC	−0.1	0.1	0.1	0	0	0	0	0.1	0	0.1	0	0.1	0	0.1	0.1	0.1	0	0.1	0	0
	SECAM	PAL	PLAY	−0.1	0	0.1	0.1	0	0	0.1	0.1	0	0.1	0	0.1	0	0.1	0.1	0.1	0	0.1	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9001																			
			MODE PIN NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
NTSC		PAL	REC	−0.1	0.2	−0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	−0.1	0.1	0.2	0.1	−0.1	0.1	−0.1	0.1	0
	PAL	NTSC	PLAY	−0.2	0.2	0	0	0	0	0	0.1	0.1	0.1	0.1	−0.1	0.1	0.2	0.1	−0.1	0.1	−0.1	0.1	−0.1
PAL		SECAM	REC	0	0.1	0	0.1	0.1	0	0	0	0	0.1	0	0	0	0.1	0.1	0	0	0	0.1	0.1
	SECAM	PAL	PLAY	0	0.1	0	0	0.1	0	0	0.1	0.1	0	0	0	0	0.1	0.1	0	0	0	0.1	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9001																			
			MODE PIN NO.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
NTSC		PAL	REC	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.2	−0.1	0.1	0.1	0	−0.1	0.1	−0.1	0.1	0	0.1
	PAL	NTSC	PLAY	0.1	0.1	0	0.1	0	0.1	0.1	0	0	0.1	−0.1	0.1	0.1	0	−0.1	0	−0.1	0.1	0	0
PAL		SECAM	REC	0	0	0.1	0	0	0	0.1	0	0	0.1	0	0.1	0.1	0	0	0	0	0.1	0.1	0
	SECAM	PAL	PLAY	0.1	0.1	0	0	0	0	0.1	0	0	0.1	0	0.1	0.1	0.1	0	0	0	0.1	0.1	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9001																			
			MODE PIN NO.	81	82	83	84																
NTSC		PAL	REC	0.1	0	0	0.1																
	PAL	NTSC	PLAY	0	0	0	0.1																
PAL		SECAM	REC	0	0	0.1	0.1																
	SECAM	PAL	PLAY	0.1	0.1	0.1	0.1																

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9002																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC	−0.2	0	0.2	0	0.4	0.3	0.3	0.2	0.2	0.4	0	−0.1	0.2	0	0.3	0.3	0.3	0.2	0.2	0
	PAL	NTSC	PLAY	−0.3	0	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0.5	−0.1	−0.2	0.2	0.1	0.3	0.3	0.3	0.3	0.3	0
PAL		SECAM	REC	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0.1	0	0.1	0	0	0	0.1
	SECAM	PAL	PLAY	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	0	0	0.1	0	0	0	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9002																			
			MODE PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	REC	0.3	0.1	0.3	−0.1	0	−0.1	0.4	−0.1	−0.2	0.1	−0.2	0.1	0.3	0.1	−0.1	−0.1	0	0.1	0	0
	PAL	NTSC	PLAY	0.4	0.2	0.3	−0.2	0	−0.1	0.4	−0.2	0.3	0.1	−0.1	0.1	0.3	0.1	−0.2	−0.1	−0.1	0.2	0	0.4
PAL		SECAM	REC	0.1	0	0.2	0	0	0	0.1	0	0	0	0	0.1	0.1	0	0	0	0	−0.1	0	0.1
	SECAM	PAL	PLAY	0.1	0	0.1	0	0	0	0.1	0	0	0	0	0.1	0.1	0	0	0	0	0.1	0	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9002																			
			MODE PIN NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
NTSC		PAL	REC	0.1	0.1	−0.1	0.2	0.2	0.2	0.2	0.2	0	0.1	0.1	−0.1	0.1	0.3	0.1	0	0.2	0.2	0.2	0.2
	PAL	NTSC	PLAY	0.1	0.1	−0.2	0	0	0.2	0	0.2	0	0.1	0.1	0	0	0.1	0.1	0.1	0.2	0.2	0.2	0.2
PAL		SECAM	REC	0	0.1	0	0.1	0.1	0.1	0	0.1	0	0.1	0	0	0	0.1	0	0.1	0.1	0.1	0	0.1
	SECAM	PAL	PLAY	0.1	0	0	0	0	0.1	0.1	0	0.1	0	0.1	0	0	0.1	0.1	0	0	0.1	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9002																			
			MODE PIN NO.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
NTSC		PAL	REC	0.2	0	0.2	0.3	0.1	0	0.2	0.2	0.2	0.2	0.2	0	0.2	0.1	−0.1	0.1	−0.1	0.1	0	0.2
	PAL	NTSC	PLAY	0.2	0	0.3	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0	0.2	0.1	−0.1	0.1	−0.1	0.1	0.1	0.2
PAL		SECAM	REC	0.1	0	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0	0.1	0.1	0	0	0	0	0.1	0.1
	SECAM	PAL	PLAY	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0.1	0	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9002																			
			MODE PIN NO.	81	82	83	84																
NTSC		PAL	REC	0.2	0.2	0.2	0.2																
	PAL	NTSC	PLAY	0.2	0.2	0.2	0.2																
PAL		SECAM	REC	0	0.1	0.1	0.1																
	SECAM	PAL	PLAY	0.1	0.1	0.1	0																

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9003																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC	0.5	0.6	1.0	−0.2	0.3	0.2	0.2	0.2	0.2	−0.2	−0.1	0.8	0.4	−0.2	−0.2	0	1.0	0.3	0.8	0.7
	PAL	NTSC	PLAY	0.5	0.4	0.7	−0.2	0.2	0.1	0.1	0.1	0.1	−0.3	−0.3	0.6	0.3	−0.3	−0.2	0	0.6	0.2	0.5	0.5
PAL		SECAM	REC	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0.1	0.1	0.1
	SECAM	PAL	PLAY	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0.1	0.1	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9003																			
			MODE PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	REC	0.7	−0.2	0.7	0.7	0.2	−0.2	0	0.2	−0.1	−0.2	0.8	0.2	0.3	−0.2	−0.2	−0.2	0.7	−0.2	−0.2	−0.2
	PAL	NTSC	PLAY	0.5	−0.2	0.5	0.5	0.2	−0.2	−0.2	−0.2	−0.1	−0.1	0.8	0.2	0.2	−0.2	−0.2	−0.2	0.7	−0.2	−0.2	−0.2
PAL		SECAM	REC	0.1	0	0.1	0.1	0	−0.1	0	−0.1	0.1	0	−0.1	0	0	0	0	0	0.1	0	0	0
	SECAM	PAL	PLAY	0.1	−0.1	0.1	0.1	0	0	0	0	0.1	0	0	0	0	0	−0.1	−0.1	0.1	0	0	0

DIGITAL C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9003										IC9004									
			MODE PIN NO.	41	42									1	2	3							
NTSC		PAL	REC	−0.2	0.4									0.9	0.7	−0.2							
	PAL	NTSC	PLAY	−0.2	0.3									0.1	0.1	−0.1							
PAL		SECAM	REC	0	0									0.1	0.1	0							
	SECAM	PAL	PLAY	0	0.1									0.1	0.1	0							

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9005																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC	0.1	0.1	0.1	0.1	−0.1	0.2	−0.1	0.1	0.1	0	0.1	0	−0.1	−0.1	0	−0.1	0	0.1	0.1	0.1
	PAL	NTSC	PLAY	0	0	0	0	−0.1	0.1	−0.1	0.1	0	0	0	0	−0.1	−0.1	0	−0.1	0	0.1	0	0
PAL		SECAM	REC	0.1	0	0.1	0.1	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0.1	0	0
	SECAM	PAL	PLAY	0.1	0.1	0.1	0.1	0	0.1	0	0	0.1	0.1	0	0.1	0	0	0	0	0	0.1	0	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9005																			
			MODE PIN NO.	21	22	23	24	25	26	27	28												
NTSC		PAL	REC	0	0.1	0.1	0	0.1	0.1	0.1	0.1												
	PAL	NTSC	PLAY	0	0.1	0.1	−0.1	0	0	0	0												
PAL		SECAM	REC	0	0.1	0	0	0	0	0.1	0												
	SECAM	PAL	PLAY	0	0.1	0.1	0	0	0	0	0.1												

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9006																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC	0.2	0.1	0.5	0.4	−0.2	0.6	−0.2	0.2	0.4	0.3	0.3	0	−0.1	−0.1	0	−0.2	0.1	0.5	0.4	0.4
	PAL	NTSC	PLAY	0.1	0	0.1	0.1	−0.2	0.2	−0.2	0.1	0.1	0.1	0.1	0	−0.2	−0.2	0	−0.1	0	0.2	0.2	0.1
PAL		SECAM	REC	0.1	0.1	0.1	0.1	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	0	0	0
	SECAM	PAL	PLAY	0.1	0.1	0.1	0.1	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0.1	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9006																			
			MODE PIN NO.	21	22	23	24	25	26	27	28												
NTSC		PAL	REC	0.2	0.5	0.5	0	0.4	0.4	0	0.3												
	PAL	NTSC	PLAY	0.1	0.2	0.2	−0.1	0.2	0.1	0	0.1												
PAL		SECAM	REC	0	0.1	0.1	0	0.1	0	0.1	0												
	SECAM	PAL	PLAY	0	0.1	0.1	0	0.1	0	0	0.1												

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9007																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
NTSC		PAL	REC	0.1	0	0.1	0.1	0.1	0.1	0.1	−0.1	−0.1	0	0	0.1	0	0.1	0.1	0.1	0	0		
	PAL	NTSC	PLAY	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0	−0.1	0.1	0	0	0	0	0.1		
PAL		SECAM	REC	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0		
	SECAM	PAL	PLAY	0.1	0	0.1	0.1	0	0	0.1	0	0	0	0	0.1	0.1	0.1	0	0	0.1	0		

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9008																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
NTSC		PAL	REC	0.1	0	0.1	0.1	0	0.1	0.1	0	−0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0.1		
	PAL	NTSC	PLAY	0.1	0	0.1	0.1	0.1	0	0.1	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0	0		
PAL		SECAM	REC	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0	0.1	0.1		
	SECAM	PAL	PLAY	0.1	0	0.1	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0	0	0		

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9009																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
NTSC		PAL	REC	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0		
	PAL	NTSC	PLAY	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0	0		
PAL		SECAM	REC	0	0	0	0	0	0	0.1	0	0	0.1	0	0.1	0.1	0	0	0	0.1	0		
	SECAM	PAL	PLAY	0.1	0	0.1	0.1	0	0	0.1	0	0	0.1	0	0.1	0.1	0.1	0	0	0	0		

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9010																			
			MODE PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC	−0.2	−0.2	1.5	−0.3	−0.2	0.5	−0.2	0.8	0.7	1.0	0.9	0.8	0.5	0.5	0.1	−0.3	−0.3	−0.2	−0.2	−0.2
	PAL	NTSC	PLAY	0	0	0.9	−0.1	−0.1	0.3	−0.1	0.5	0.6	0.5	0.6	0.4	0.4	0.5	0.3	−0.1	−0.1	−0.1	−0.1	−0.1
PAL		SECAM	REC	0	0	0.1	−0.1	0	0	0	0	0	0.1	−0.1	0	0	0.1	0	0	0	0	0	0
	SECAM	PAL	PLAY	0	0	0.1	0	0	0	0	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9010																			
			MODE PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	REC	−0.2	−0.2	−0.2	−0.2	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	1.2	1.2	−0.3	0.3	0.8	0.1	0.5	0.7	0.7	0.4
	PAL	NTSC	PLAY	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	1.1	1.3	−0.1	0.4	0.8	0.4	0.3	0.5	0.4	0.5
PAL		SECAM	REC	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0.1	0	−0.1	−0.1	0	0.1
	SECAM	PAL	PLAY	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0.1	0.1	0	0	0	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9010																			
			MODE PIN NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
NTSC		PAL	REC	0.4	−0.3	0.5	−0.3	−0.2	1.1	0.8	1.0	1.0	1.0	−0.3	0.9	0.9	0.9	0.8	0.7	0.7	0.6	0.9	−0.4
	PAL	NTSC	PLAY	0.5	−0.2	0.5	−0.2	−0.1	1.1	0.9	1.0	1.5	1.0	−0.2	0.8	0.7	0.7	0.6	0.5	0.6	0.4	0.6	−0.3
PAL		SECAM	REC	0.1	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	−0.1
	SECAM	PAL	PLAY	0.1	0	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	−0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	REF NO.	IC9010																			
			MODE PIN NO.	61	62	63	64																
NTSC		PAL	REC	0.9	1.0	−0.3	−0.3																
	PAL	NTSC	PLAY	0.6	0.6	−0.3	−0.3																
PAL		SECAM	REC	0.1	0.1	0	0																
	SECAM	PAL	PLAY	0.1	0.1	0	0																

DIGITAL C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9011																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0	0	2.0	−0.2	−0.2	0.8	−0.2	0.9	0.8	1.8	1.5	1.5	1.2	1.2	0	−0.3	−0.1	−0.1	−0.1	−0.1
	PAL	NTSC	PLAY		0	0	0.1	0	0	0	−0.1	0	0	0.1	0.1	0.1	0.1	0.1	0	0	−0.1	−0.1	−0.1	−0.1
PAL		SECAM	REC		0	−0.1	0.1	0	0	0	0	0	0.1	0	0.1	0	0	−0.1	0.1	0	−0.1	−0.1	−0.1	−0.1
	SECAM	PAL	PLAY		0	0	0.1	0	0	0	0	0.1	0	0.1	0.1	0.1	0	0	0.1	0	0	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9011																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	REC		−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	1.5	−0.2	0.2	1.2	1.1	1.1	1.0	1.2	0.3
	PAL	NTSC	PLAY		−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	0.1	0	0	0.1	0.1	0.1	0.1	0	0
PAL		SECAM	REC		0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	−0.1	0.2	−0.1	−0.1	0.2	0.1	0.1	−0.1	0.1	−0.1
	SECAM	PAL	PLAY		0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0.1	0.1	0	0	0.1

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9011																			
				PIN NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
NTSC		PAL	REC		0.7	−0.3	0.6	−0.3	−0.2	1.4	−0.2	1.5	1.4	1.4	−0.3	1.3	1.2	1.1	1.1	1.1	1.1	0.8	−0.4	−0.3
	PAL	NTSC	PLAY		0	0	0	0	0	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	0
PAL		SECAM	REC		0	0	0.1	−0.1	0	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	−0.1	0
	SECAM	PAL	PLAY		0	0	0	0	0	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9011																			
				PIN NO.	61	62	63	64																
NTSC		PAL	REC		1.4	1.3	−0.4	−0.4																
	PAL	NTSC	PLAY		0.1	0.1	0	0																
PAL		SECAM	REC		0.1	0.1	0	0																
	SECAM	PAL	PLAY		0.1	0.1	0	0																

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9012																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0	0	0.1	0.1	−0.1	0.1	0	0	0.1	0.1	−0.1	0	0.1	0	0.1	0.1	0.1	0.1	0.1	−0.1
	PAL	NTSC	PLAY		0	0	0	0.1	0	0.1	0	0	0	0.1	−0.1	0	0.1	0	0	0	0	0	0	0
PAL		SECAM	REC		0	0	0.1	0	0	0.1	0	0	0	0.1	0	0.1	0	0.1	0	0	0	0	0	0
	SECAM	PAL	PLAY		0	0	0.1	0	0	0.1	0	0	0	0.1	0	0	0.1	0	0	0	0	0.1	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9012																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30										
NTSC		PAL	REC		0.1	0.1	0	0	0.1	0	0	0	0.1	0										
	PAL	NTSC	PLAY		0.1	0.1	0	−0.1	0.1	−0.1	0	0	0.1	0										
PAL		SECAM	REC		0.1	0	0	0	0.1	0	0	0	0	0										
	SECAM	PAL	PLAY		0.1	0	0	0	0.1	0	0	0	0	0										

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	9013																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0	0	0.1	0.1	0	0.1	0	0	0	0.1	0	0	0.1	0.1	0.1	0.2	0.1	0	0	0
	PAL	NTSC	PLAY		0	0	0.1	0.1	0	0.1	0	0	0	0.1	0	0	0	0.1	0	0.1	0.1	0	0	0
PAL		SECAM	REC		0	0	0.1	0	0	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
	SECAM	PAL	PLAY		0	0	0	0.1	0	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9013																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30										
NTSC		PAL	REC		0.1	0.1	0	0	0.1	0	0	0	0.1	0										
	PAL	NTSC	PLAY		0.1	0.1	0	0	0.1	0	0	0	0.1	0										
PAL		SECAM	REC		0.1	0	0	0	0.1	0	0	0	0	0										
	SECAM	PAL	PLAY		0.1	0	0	0	0.1	0	0	0	0	0										

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9014																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0.1	0.1	0	0	0	0	0	0.1	0.1	0.1	0.1	0	0	0.1						
	PAL	NTSC	PLAY		0.1	0	0.1	0	0	0	0	0.1	0.1	0.1	0.1	0	−0.1	0.1						
PAL		SECAM	REC		0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.1						
	SECAM	PAL	PLAY		0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.1						

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9015																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
NTSC		PAL	REC		−0.1	0.1	0	−0.1	−0.1	0.1	−0.1	0.1	−0.1	−0.1	0.1	0.1	0	0.1						
	PAL	NTSC	PLAY		−0.1	0.1	0.1	0	0	0.1	−0.1	0.1	−0.1	−0.1	0.1	0.1	0	0.1						
PAL		SECAM	REC		0	0.1	0.1	0	0	0.1	0	0.1	0	0	0.1	0.1	0	0.1						
	SECAM	PAL	PLAY		0	0.1	0.1	0	0	0.1	0	0.1	0	0	0.1	0.1	0	0.1						

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9016																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0.3	0.3	0.3	0.3	0.7	−0.2	−0.2	0.7	−0.2	0.7	−0.2	0.6	−0.2	0.6						
	PAL	NTSC	PLAY		0.1	0.1	0.1	0.1	0.2	−0.1	−0.1	0.2	−0.1	0.2	−0.1	0.2	−0.1	0.2						
PAL		SECAM	REC		0	0.1	0.1	0	0.1	0	0	0.1	0	0.1	0	0.1	0	0.1						
	SECAM	PAL	PLAY		0.1	0	0	0.1	0.1	0	0	0.1	0	0.1	0	0.1	0	0.1						

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9201																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
NTSC		PAL	REC		−0.1	0.1	−0.1	−0.1	0	0	0	0	−0.1	−0.1	−0.1	0.1	−0.1	0.1						
	PAL	NTSC	PLAY		0	0.1	0	0	0	0	0	0	0	0	−0.1	0.1	−0.1	0.1						
PAL		SECAM	REC		0	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0.1						
	SECAM	PAL	PLAY		0	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0.1						

DIGITAL C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9202																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
NTSC		PAL	REC		0	0.1	0	0	0.1	0	0	0	0	0	0	0.1	0	0.1						
	PAL	NTSC	PLAY		−0.1	0.1	0	0	0.1	−0.1	−0.1	−0.1	−0.2	−0.1	−0.2	0.2	−0.1	0.1						
PAL		SECAM	REC		0	0.1	0	0	0.1	0	0	0	0	0	0	0.1	0	0.1						
	SECAM	PAL	PLAY		0	0.1	0	0	0.1	0	0	0	0	0	0	0.1	0	0.1						

DIGITAL C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9001			Q9002			Q9003			Q9004			Q9005			Q9006		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.2	0	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	2.1	0.1	0.1	0.1	0.1	0.1	0.1
	PAL	NTSC	PLAY		0	0.3	0.1	0.1	0.3	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PAL		SECAM	REC		0	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	0	0.1	0.1	0.1	0	0	0
	SECAM	PAL	PLAY		0	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	0	0.1	0.1	0.1	0	0	0
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9007			Q9008			Q9009			Q9010			Q9011			Q9012		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0	0.1	0	0.1	0.1
	PAL	NTSC	PLAY		0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0	0.1	0.1	−0.1	0.1	0.1	0.1	0.1
PAL		SECAM	REC		0.1	0.1	0.1	0	0.1	0	0	0	0.1	0	0	0	0	−0.1	0.1	0	0	0
	SECAM	PAL	PLAY		0	0.1	0.1	0	0.1	0.1	0	0.1	0.1	0	0	0	0	0	0	0	0	0
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9201			Q9202			Q9203			Q9204			Q9205			Q9206		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.1	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
	PAL	NTSC	PLAY		−0.1	0.2	−0.1	0	0.1	0	0	−0.1	0	−0.1	−0.1	0	−0.1	−0.1	0	−0.1	0.1	−0.1
PAL		SECAM	REC		0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SECAM	PAL	PLAY		0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9207			Q9208														
				PIN NO.	E	C	B	E	C	B												
NTSC		PAL	REC		0.1	0	0.1	0.1	0	0.1												
	PAL	NTSC	PLAY		0.1	0	0.1	0.1	−0.1	0.1												
PAL		SECAM	REC		0.1	0	0.1	0	0	0.1												
	SECAM	PAL	PLAY		0	0	0	0	0	0												
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9201																	
				PIN NO.	E	C	B															
NTSC		PAL	REC		0	0	0															
	PAL	NTSC	PLAY		0	0.1	0.1															
PAL		SECAM	REC		0	0	0															
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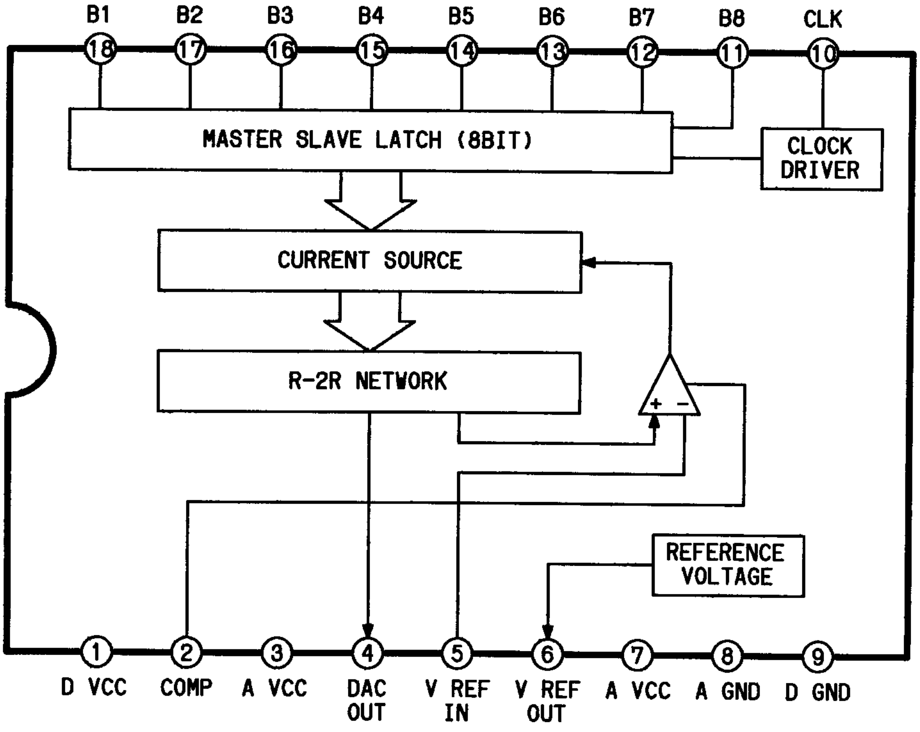
IC9007, IC9008, IC9009 HA19510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CLOCK DRIVER
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R-2R NETWORK
+
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4
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6
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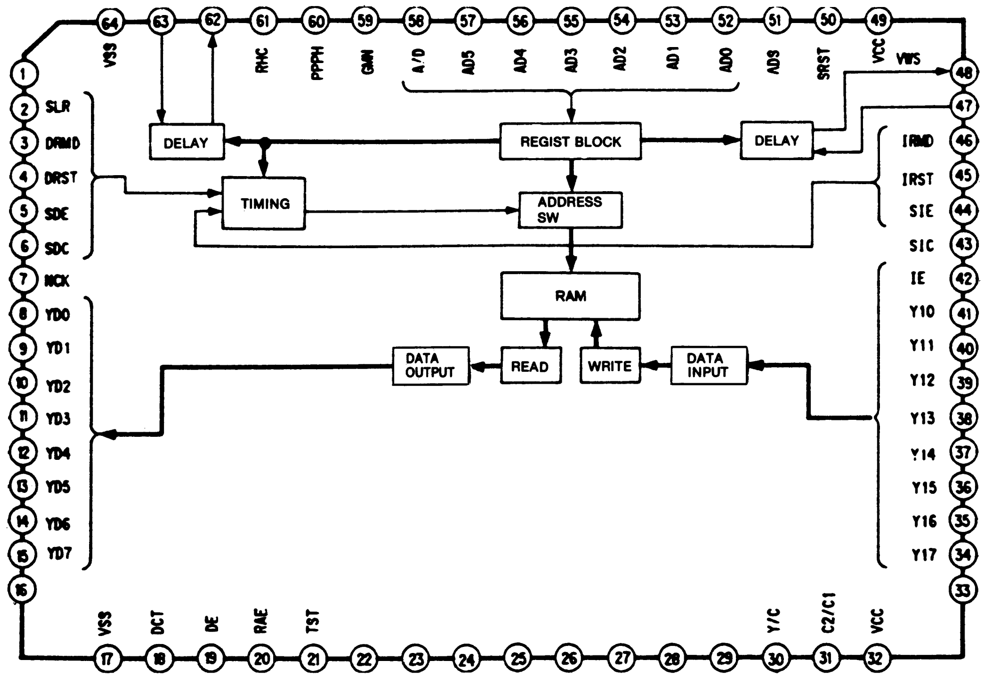
IC9010 MN4710F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RAE
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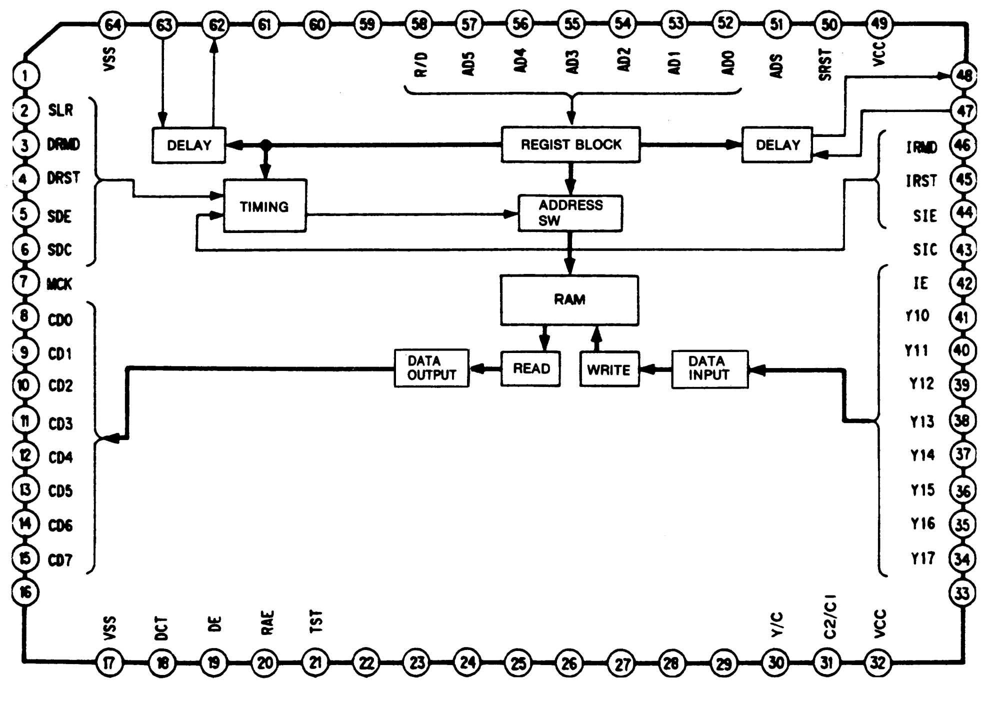
IC9011 MN4712F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C2/C1
DELAY
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RAM
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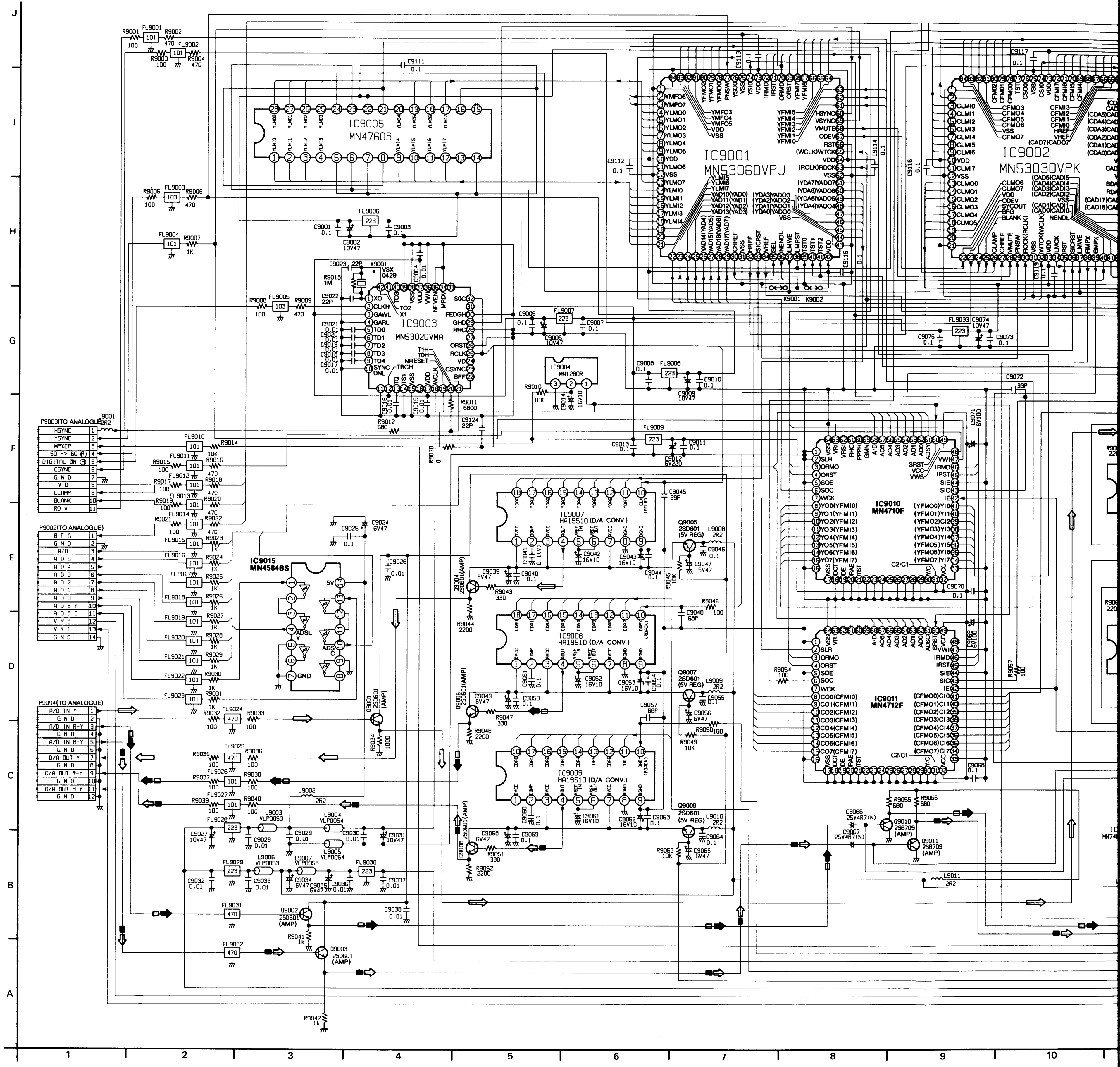
READ
WRITE
DATA INPUT

DIGITAL SCHEMATIC DIAGRAM

R-Y MAIN SIGNAL PATH

B-Y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IC9008 HA19510 (D/A CONV.)
IC9009 HA19510 (D/A CONV.)
IC9010 MN4710F
IC9011 MN4712F
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P9003 (TO ANALOGUE)
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YSYNC
MPXCP
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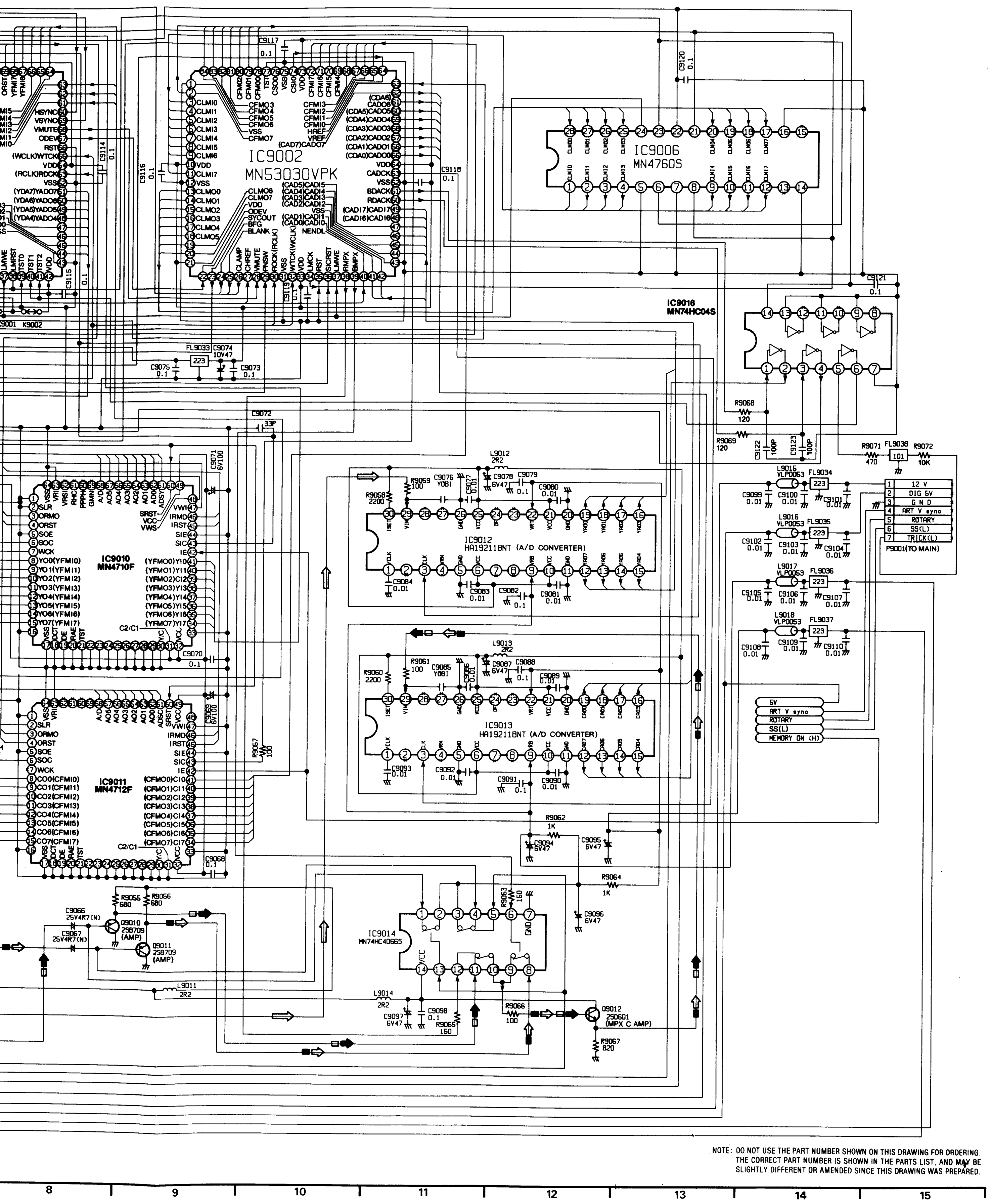
DIGITAL ON
CSYNC
GND
VD
CLAMP
BLANK
RD V
P9002 (TO ANALOGUE)
BFG
R/D
AD5
AD4
AD3
AD2
AD1
AD0
ADSY
ADSC
VRB
VRT
P9004 (TO ANALOGUE)
A/D IN Y
A/D IN R-Y
A/D IN B-Y
D/A OUT Y
D/A OUT R-Y
D/A OUT B-Y
Q9001 2SD601 (AMP)
Q9002 2SD601 (AMP)
Q9003 2SD601 (AMP)
Q9004 2SD601 (AMP)
Q9005 2SD601 (5V REG)
Q9006 2SD601 (AMP)
Q9007 2SD601 (5V REG)
Q9008 2SD601 (AMP)
Q9009 2SD601 (5V REG)
Q9010 2SB709 (AMP)
Q9011 2SB709 (AMP)
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

MAIN SIGNAL PATH

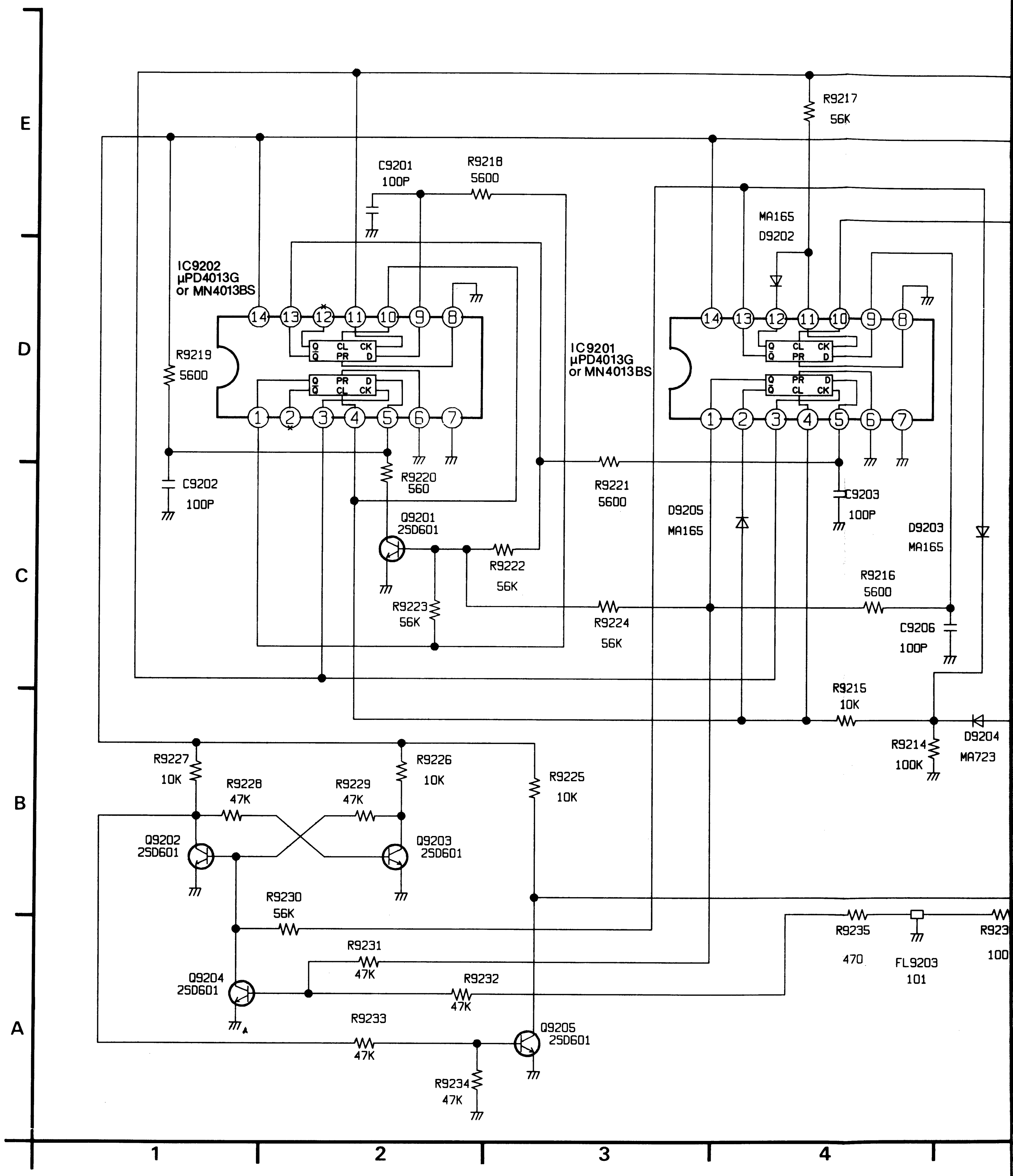
B-Y MAIN SIGNAL PATH

LUMINANCE MAIN SIGNAL PATH

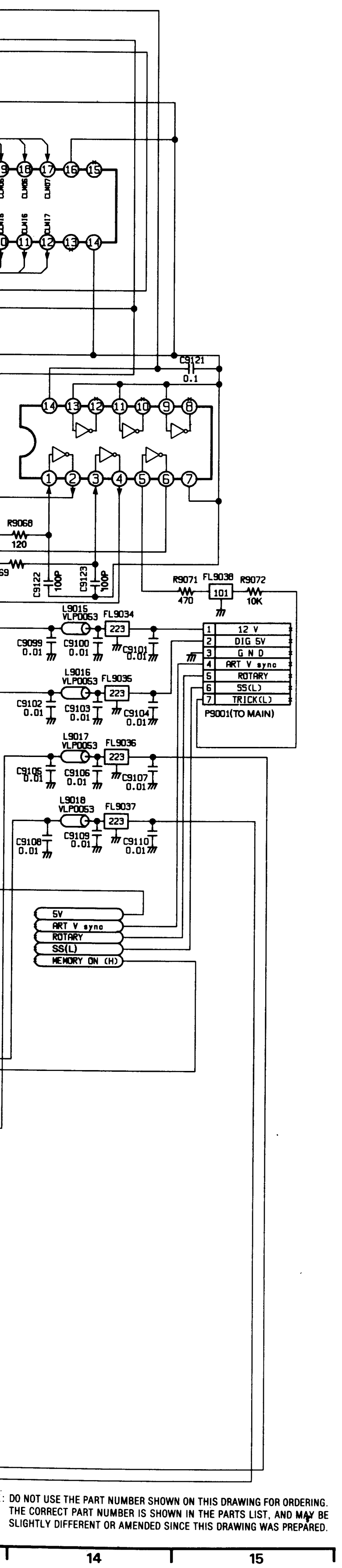

IC9002
MN53030VPK
IC9006
MN4760S
IC9016
MN74HC04S
IC9010
MN4710F
IC9011
MN4712F
IC9012
HA19211BNT (A/D CONVERTER)
IC9013
HA19211BNT (A/D CONVERTER)
IC9014
MN74HC4066S
Q9010
2SB709
(AMP)
Q9011
2SB709
(AMP)
Q9012
2SD601
(MPX C AMP)
P9001(TO MAIN)
12 V
DIG 5V
G N D
ART V sync
ROTARY
SS(L)
TRICK(L)
5V
ART V sync
ROTARY
SS(L)
MEMORY ON (H)
8
9
10
11
12
13
14
15

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DIGITAL SLOW & STILL SCHEMATIC DIAGRAM

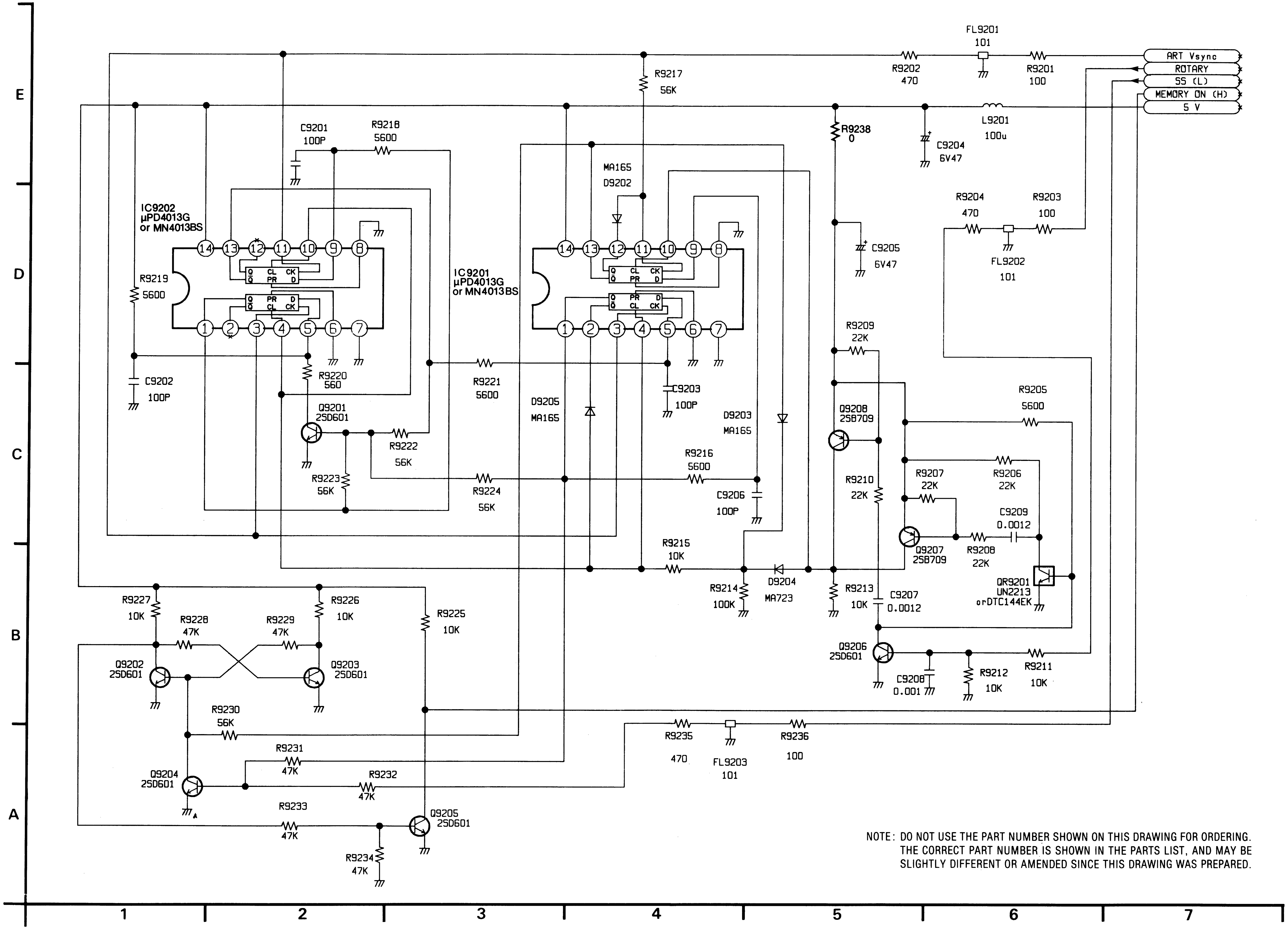

E
D
C
B
A
IC9202
μPD4013G
or MN4013BS
IC9201
μPD4013G
or MN4013BS
C9201
100P
R9218
5600
R9217
56K
MA165
D9202
R9219
5600
C9202
100P
R9220
560
Q9201
2SD601
R9221
5600
C9203
100P
D9205
MA165
D9203
MA165
R9222
56K
R9223
56K
R9224
56K
R9216
5600
C9206
100P
R9215
10K
R9214
100K
D9204
MA723
R9227
10K
R9226
10K
R9225
10K
R9228
47K
R9229
47K
Q9202
2SD601
Q9203
2SD601
R9230
56K
R9231
47K
R9232
47K
Q9204
2SD601
R9233
47K
Q9205
2SD601
R9234
47K
R9235
470
FL9203
101
R923
100
1
2
3
4

LUMINANCE MAIN SIGNAL PATH


C9121
0.1
R9068
120
C9122
100P
C9123
100P
R9071
470
FL9038
101
R9072
10K
L9015
VLP0053
FL9034
223
C9099
0.01
C9100
0.01
C9101
0.01
L9016
VLP0053
FL9035
223
C9102
0.01
C9103
0.01
C9104
0.01
L9017
VLP0053
FL9036
223
C9105
0.01
C9106
0.01
C9107
0.01
L9018
VLP0053
FL9037
223
C9108
0.01
C9109
0.01
C9110
0.01
1 12 V
2 DIG 5V
3 G N D
4 ART V sync
5 ROTARY
6 SS(L)
7 TRICK(L)
PS001(TO MAIN)
5V
ART V sync
ROTARY
SS(L)
MEMORY ON (H)
14
15

: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DIGITAL SLOW & STILL SCHEMATIC DIAGRAM


E
D
C
B
A
1
2
3
4
5
6
7
FL9201
101
R9202
470
R9201
100
ART Vsync
ROTARY
SS (L)
MEMORY ON (H)
5 V
R9217
56K
R9238
0
C9204
6V47
L9201
100u
C9201
100P
R9218
5600
MA165
D9202
IC9202
μPD4013G
or MN4013BS
R9219
5600
IC9201
μPD4013G
or MN4013BS
Q
Q̄
CL
CK
PR
D
C9205
6V47
R9204
470
R9203
100
FL9202
101
C9202
100P
R9220
560
R9221
5600
C9203
100P
Q9201
2SD601
R9222
56K
R9223
56K
R9224
56K
D9205
MA165
D9203
MA165
R9216
5600
C9206
100P
R9209
22K
Q9208
2SB709
R9205
5600
R9210
22K
R9207
22K
R9206
22K
C9209
0.0012
Q9207
2SB709
R9208
22K
R9215
10K
R9214
100K
D9204
MA723
R9213
10K
C9207
0.0012
QR9201
UN2213
orDTC144EK
R9227
10K
R9228
47K
R9229
47K
R9226
10K
R9225
10K
Q9202
2SD601
Q9203
2SD601
Q9206
2SD601
C9208
0.001
R9212
10K
R9211
10K
R9230
56K
R9235
470
FL9203
101
R9236
100
R9231
47K
R9232
47K
Q9204
2SD601
R9233
47K
Q9205
2SD601
R9234
47K

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
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DRIVE C.B.A. (VEP06709A)

DRIVE C.B.A.

Transistor	
Q99301	A-4
Q99302	A-3
Q99303	A-3
Q99304	A-3
Q99305	A-3
Q99306	A-4

Transistor & Resistor	
QR99301	C-3
QR99302	C-4
QR99303	A-3
QR99304	A-4
QR99305	A-4
QR99306	C-4
QR99307	A-5
QR99308	B-3
QR99309	B-3

Integrated Circuit	
IC99301	B-6
IC99302	B-7
IC99303	A-2
IC99304	A-2
IC99305	C-7
IC99306	C-5
IC99307	B-6
IC99308	A-5
IC99309	A-5
IC99310	C-5
IC99311	C-7

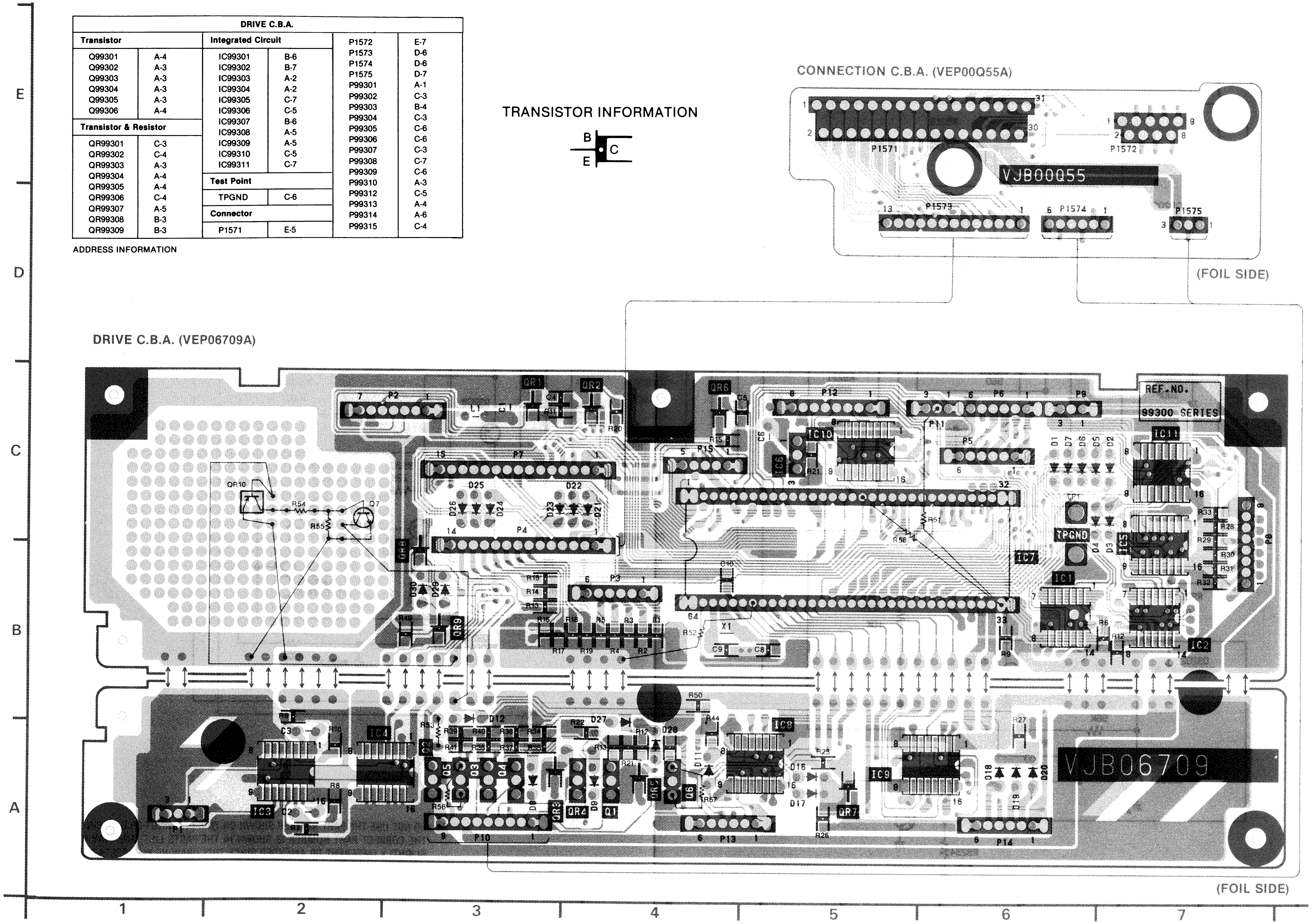
Test Point	
TPGND	C-6

Connector	
P1571	E-5
P1572	E-7
P1573	D-6
P1574	D-6
P1575	D-7
P99301	A-1
P99302	C-3
P99303	B-4
P99304	C-3
P99305	C-6
P99306	C-6
P99307	C-3
P99308	C-7
P99309	C-6
P99310	A-3
P99312	C-5
P99313	A-4
P99314	A-6
P99315	C-4

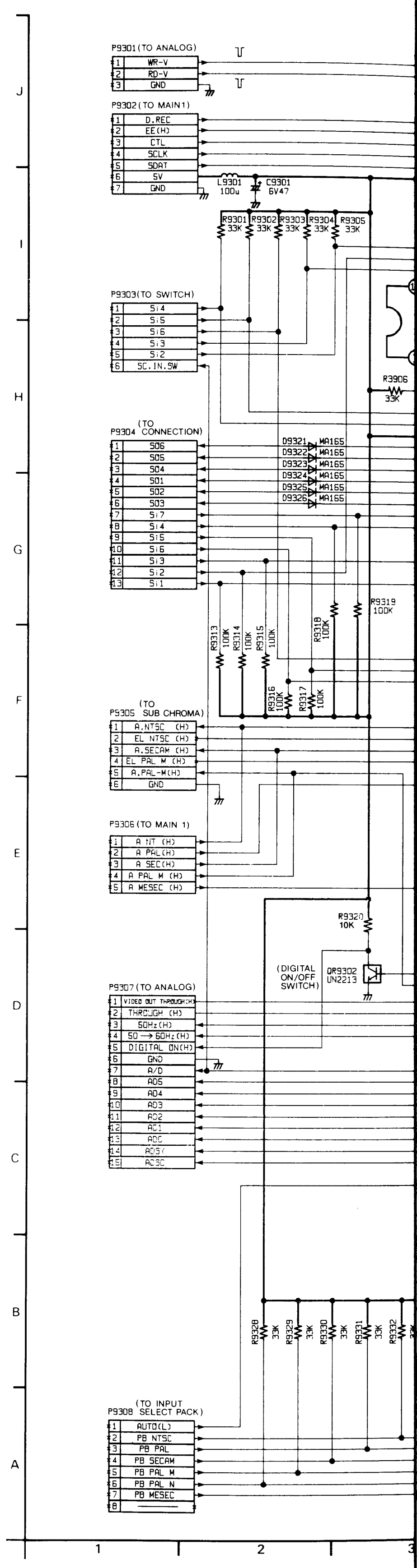
ADDRESS INFORMATION

TRANSISTOR INFORMATION

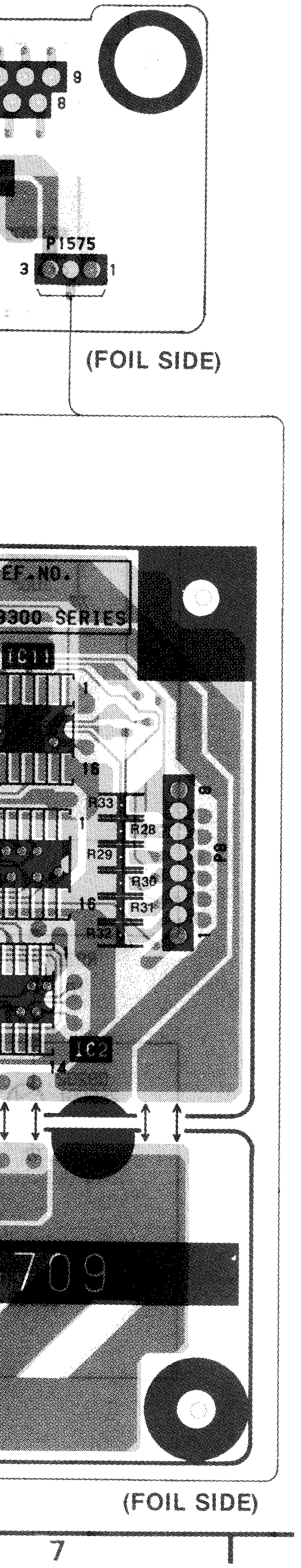
B
C
E


CONNECTION C.B.A. (VEP00Q55A)
P1571
P1572
P1573
P1574
P1575
VJB00Q55
(FOIL SIDE)
DRIVE C.B.A. (VEP06709A)
REF. NO.
99300 SERIES
TPGND
TP1
VJB06709
(FOIL SIDE)
E
D
C
B
A
1
2
3
4
5
6
7

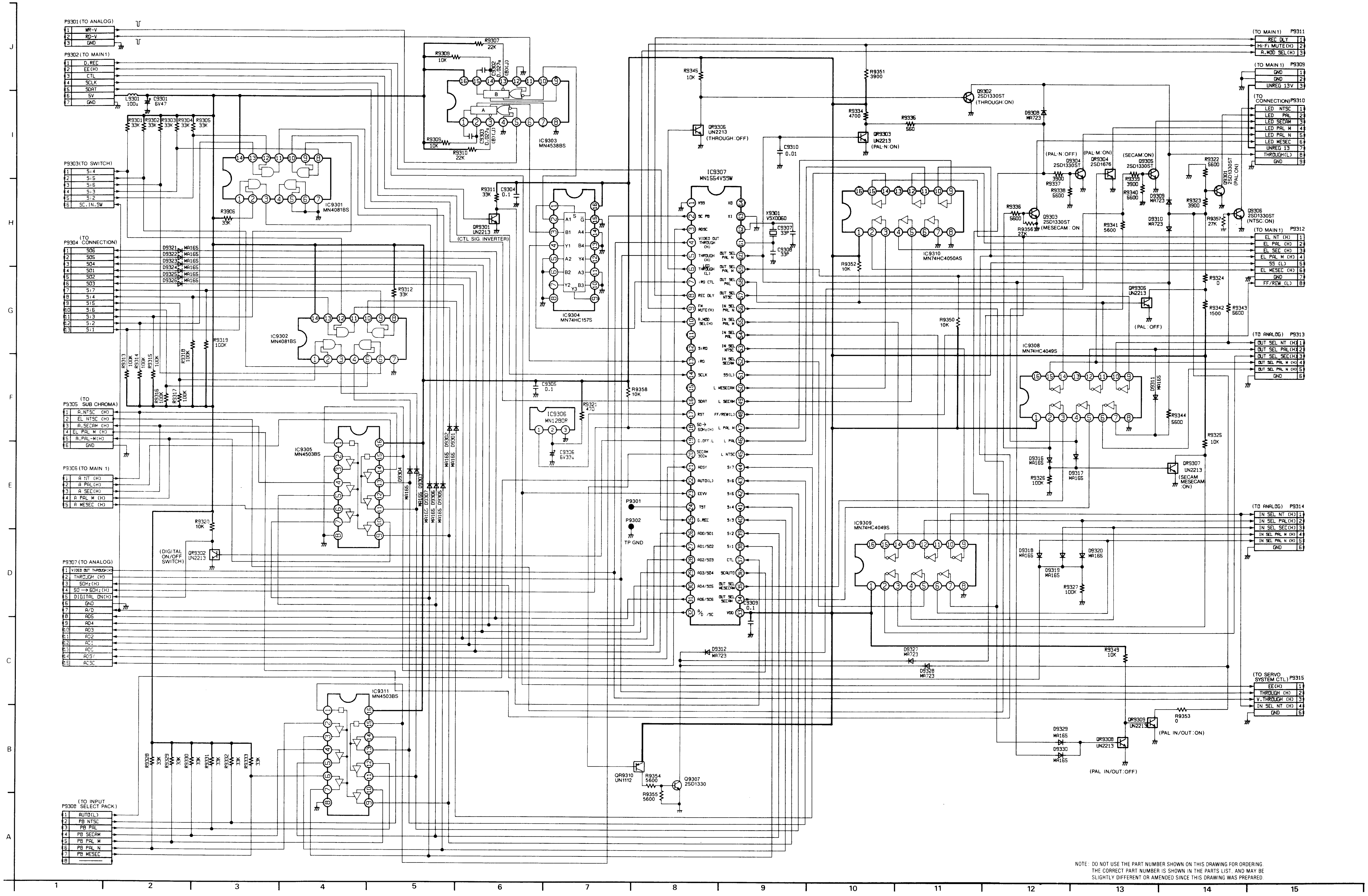
DRIVE SCHEMATIC D


P9301 (TO ANALOG)
P9302 (TO MAIN1)
P9303 (TO SWITCH)
P9304 (TO CONNECTION)
P9305 (TO SUB CHROMA)
P9306 (TO MAIN 1)
P9307 (TO ANALOG)
P9308 (TO INPUT SELECT PACK)
(DIGITAL ON/OFF SWITCH)
J
I
H
G
F
E
D
C
B
A
1
2

DRIVE SCHEMATIC DIAGRAM



P1575
(FOIL SIDE)
EF. NO.
9300 SERIES
IC1
R33
R28
R29
R30
R31
R32
IC2
709
(FOIL SIDE)
7



P9301 (TO ANALOG)
WR-V
RD-V
GND
P9302 (TO MAIN 1)
D.REC
EE(H)
CTL
SCLK
SDAT
5V
GND
P9303 (TO SWITCH)
S-4
S-5
S-6
S-3
S-2
SC.IN.SW
P9304 (TO CONNECTION)
P9305 (TO SUB CHROMA)
A.NTSC (H)
EL NTSC (H)
A.SECAM (H)
EL PAL M (H)
A.PAL-M (H)
GND
P9306 (TO MAIN 1)
A NT (H)
A PAL (H)
A SEC (H)
A PAL M (H)
A MESEC (H)
P9307 (TO ANALOG)
VIDEO OUT THROUGH (H)
THROUGH (H)
50Hz (H)
50→60Hz (H)
DIGITAL ON (H)
GND
P9308 (TO INPUT SELECT PACK)
AUTO (L)
PB NTSC
PB PAL
PB SECAM
PB PAL M
PB PAL N
PB MESEC
IC9301 MN4081BS
IC9302 MN4081BS
IC9303 MN4538BS
IC9304 MN74HC157S
IC9305 MN4503BS
IC9306 MN1280R
IC9307 MN15S4V55W
IC9308 MN74HC4049S
IC9309 MN74HC4049S
IC9310 MN74HC4050AS
IC9311 MN4503BS
QR9301 UN2213 (CTL SIG INVERTER)
QR9302 UN2213 (DIGITAL ON/OFF SWITCH)
QR9303 UN2213 (PAL-N:ON)
QR9305 UN2213 (PAL:OFF)
QR9306 UN2213 (THROUGH:OFF)
QR9307 UN2213 (SECAM MESECAM:ON)
QR9308 UN2213 (PAL IN/OUT:OFF)
QR9309 UN2213 (PAL IN/OUT:ON)
QR9310 UN1112
Q9301 2SD1330ST (PAL:ON)
Q9302 2SD1330ST (THROUGH:ON)
Q9303 2SD1330ST (MESECAM:ON)
Q9304 2SD1330ST (PAL-N:OFF)
Q9305 2SD1330ST (SECAM:ON)
Q9306 2SD1330ST (NTSC:ON)
Q9307 2SD1330
QR9304 2SD1676 (PAL-M:ON)
X9301 VSX0060
L9301 100µ
C9301 6V47
C9310 0.01
C9305 0.1
C9309 0.1
C9306 6V33µ
P9301
P9302
TP GND
P9311 (TO MAIN 1)
REC DLY
Hi-Fi MUTE (H)
A.MOD SEL (H)
P9309 (TO MAIN 1)
GND
GND
UNREG 13V
P9310 (TO CONNECTION)
LED NTSC
LED PAL
LED SECAM
LED PAL M
LED PAL N
LED MESEC
UNREG 13
THROUGH (L)
GND
P9312 (TO MAIN 1)
EL NT (H)
EL PAL (H)
EL SEC (H)
EL PAL M (H)
SS (L)
EL MESEC (H)
GND
FF/REW (L)
P9313 (TO ANALOG)
OUT SEL NT (H)
OUT SEL PAL (H)
OUT SEL SEC (H)
OUT SEL PAL M (H)
OUT SEL PAL N (H)
GND
P9314 (TO ANALOG)
IN SEL NT (H)
IN SEL PAL (H)
IN SEL SEC (H)
IN SEL PAL M (H)
IN SEL PAL N (H)
GND
P9315 (TO SERVO SYSTEM CTL)
EE (H)
THROUGH (H)
V.THROUGH (H)
IN SEL NT (H)
GND
J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
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7
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14
15

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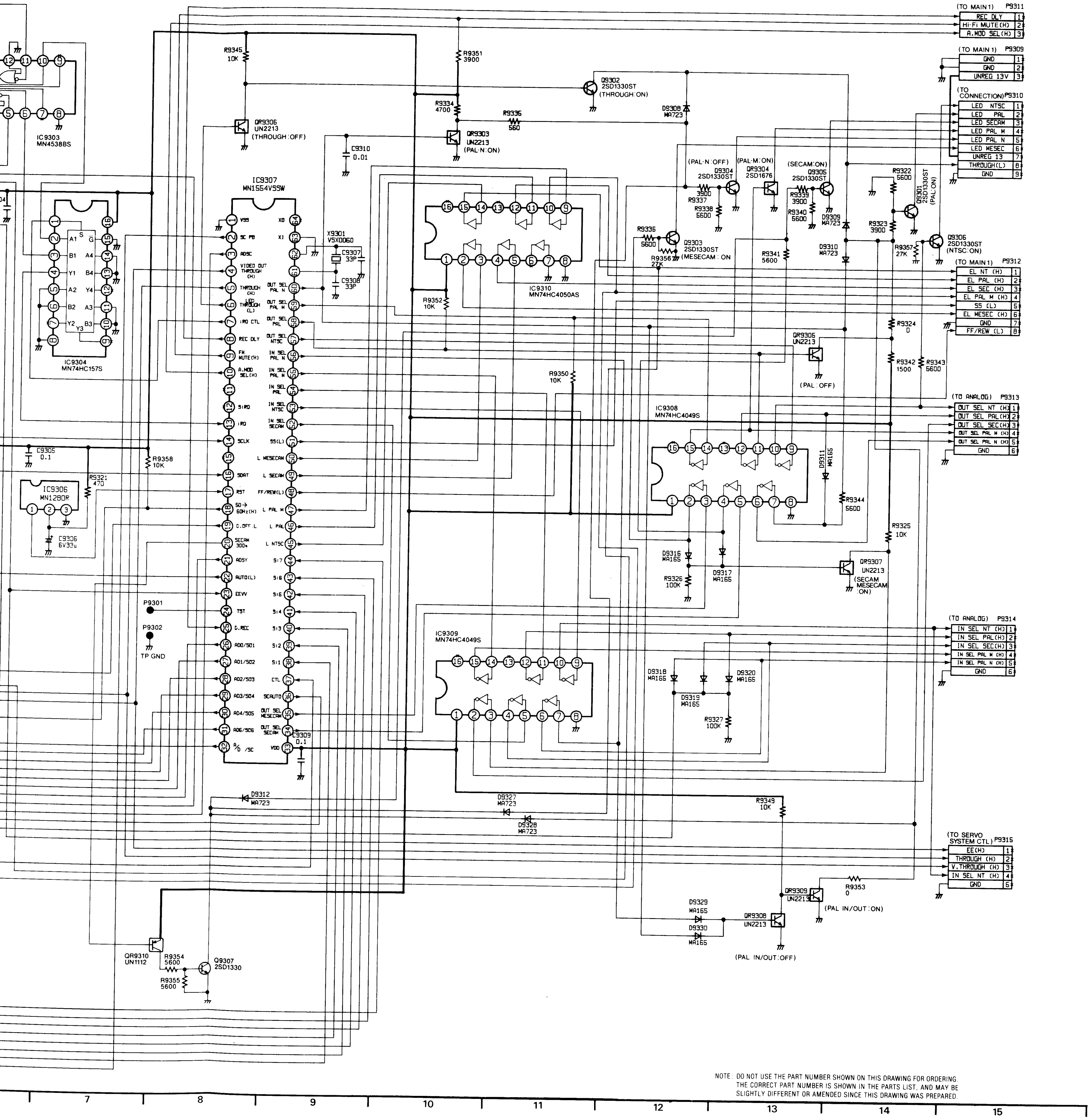
IC9303
MN4538BS
IC9304
MN74HC157S
IC9306
MN1280R
IC9307
MN1554VSSW
IC9308
MN74HC4049S
IC9309
MN74HC4049S
IC9310
MN74HC4050AS
X9301
VSX0060
R9345
10K
R9351
3900
R9334
4700
R9336
560
QR9306
UN2213
(THROUGH:OFF)
QR9303
UN2213
(PAL·N:ON)
C9310
0.01
C9307
33P
C9308
33P
C9305
0.1
C9306
6V33u
C9309
0.1
R9321
470
R9358
10K
R9352
10K
R9350
10K
Q9302
2SD1330ST
(THROUGH:ON)
D9308
MA723
(PAL·N:OFF)
Q9304
2SD1330ST
(PAL·M:ON)
QR9304
2SD1676
(SECAM:ON)
Q9305
2SD1330ST
Q9303
2SD1330ST
(MESECAM : ON
Q9301
2SD1330ST
(PAL:ON)
Q9306
2SD1330ST
(NTSC:ON)
QR9305
UN2213
(PAL:OFF)
QR9307
UN2213
(SECAM MESECAM :ON)
QR9308
UN2213
(PAL IN/OUT:OFF)
QR9309
UN2213
(PAL IN/OUT:ON)
QR9310
UN1112
Q9307
2SD1330
P9301
P9302
TP GND
(TO MAIN 1) P9311
REC DLY
Hi-Fi MUTE(H)
A.MOD SEL(H)
(TO MAIN 1) P9309
GND
GND
UNREG 13V
(TO CONNECTION) P9310
LED NTSC
LED PAL
LED SECAM
LED PAL M
LED PAL N
LED MESEC
UNREG 13
THROUGH(L)
GND
(TO MAIN 1) P9312
EL NT (H)
EL PAL (H)
EL SEC (H)
EL PAL M (H)
SS (L)
EL MESEC (H)
GND
FF/REW (L)
(TO ANALOG) P9313
OUT SEL NT (H)
OUT SEL PAL(H)
OUT SEL SEC(H)
OUT SEL PAL M (H)
OUT SEL PAL N (H)
GND
(TO ANALOG) P9314
IN SEL NT (H)
IN SEL PAL(H)
IN SEL SEC(H)
IN SEL PAL M (H)
IN SEL PAL N (H)
GND
(TO SERVO SYSTEM CTL) P9315
EE(H)
THROUGH (H)
V.THROUGH (H)
IN SEL NT (H)
GND
7
8
9
10
11
12
13
14
15

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DRIVE C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9301													
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NTSC		PAL	REC		5.0	5.0	5.0	0	0	0	0	5.0	5.0	0	5.0	5.0	5.0	5.0
	PAL	NTSC	PLAY		4.9	4.9	5.0	0	0	0	0	4.9	4.9	5.0	5.0	4.9	4.9	5.0
PAL		SECAM	REC		4.9	4.9	5.0	0	0	0	0	4.9	2.9	5.0	5.0	5.0	5.0	5.0
	SECAM	PAL	PLAY		5.0	5.0	5.0	0	0	0	0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9302													
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
NTSC		PAL	REC		5.0	5.0	5.0	5.0	5.0	2.5	0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	PAL	NTSC	PLAY		4.9	4.9	5.0	4.8	4.9	1.9	0	4.9	4.9	5.0	5.0	4.9	4.9	5.0
PAL		SECAM	REC		4.9	4.8	4.8	5.0	4.9	4.9	0	4.9	4.9	5.0	5.0	4.9	4.9	5.0
	SECAM	PAL	PLAY		5.0	4.9	4.9	5.0	5.0	5.0	0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9303															
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC		0	5.0	5.0	0	4.2	0.1	5.0	0	0	0.1	5.0	0	5.0	5.0	0	5.0
	PAL	NTSC	PLAY		0	5.0	4.9	0	4.2	0.1	4.9	0	4.9	0.1	5.0	0	4.9	4.9	0	5.0
PAL		SECAM	REC		0	0	5.0	0	4.2	0.1	4.9	0	5.0	0	5.1	0	5.0	5.0	0	5.0
	SECAM	PAL	PLAY		0	5.0	5.0	0	4.2	0	4.9	0	5.0	0	5.1	0	5.0	5.0	0	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9304															
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC		5.0	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	5.0
	PAL	NTSC	PLAY		4.3	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0
PAL		SECAM	REC		0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	5.0
	SECAM	PAL	PLAY		0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9305															
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC		5.0	0	0	0	5.0	0	5.0	0	5.0	0.7	5.0	5.0	4.9	0.7	5.0	5.0
	PAL	NTSC	PLAY		4.8	0	0	0	4.9	0	4.8	0	4.8	0.8	4.9	4.9	4.1	0.8	4.8	4.9
PAL		SECAM	REC		5.0	0	0.1	4.9	4.9	0	5.0	0	4.9	0.7	4.9	0	4.9	0.7	5.0	5.0
	SECAM	PAL	PLAY		5.0	0	0.1	4.9	5.0	0	5.0	0	4.9	0.8	5.0	0	4.8	0.8	4.9	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9306		
				PIN NO.	1	2	3
NTSC		PAL	REC		5.0	5.0	0
	PAL	NTSC	PLAY		5.0	5.0	0
PAL		SECAM	REC		5.0	5.0	0
	SECAM	PAL	PLAY		5.0	5.0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9307																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0	4.9	0.3	0	0	3.9	5.0	5.0	0	5.1	3.5	5.0	0.1	4.7	3.0	4.3	5.0	0	0	5.0
	PAL	NTSC	PLAY		0	4.8	0.3	0	0	3.9	0	0	0	5.1	3.5	4.9	0	4.5	3.3	4.3	5.0	0	3.9	4.9
PAL		SECAM	REC		0	4.8	0	0	0	3.9	0	5.0	0	5.1	3.5	4.9	0	4.7	3.0	4.2	5.0	0	3.9	4.9
	SECAM	PAL	PLAY		0	5.0	0	0	0	3.9	0	0	0	5.1	3.5	5.0	0	4.6	3.4	4.3	5.0	0	3.9	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9307																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	REC		0	0	4.8	5.0	5.0	4.7	4.7	4.7	4.7	4.7	4.7	4.5	5.0	5.0	5.0	5.0	2.6	5.0	5.0	5.0
	PAL	NTSC	PLAY		0	0	0.9	5.0	0	5.0	5.0	5.0	5.0	5.0	5.0	4.9	5.0	5.0	5.0	4.9	2.4	4.8	4.9	4.9
PAL		SECAM	REC		0	0	4.8	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0	5.0	5.0	4.6	5.0	5.0	5.0
	SECAM	PAL	PLAY		0	0	0.9	5.0	0	5.0	5.0	5.0	5.0	5.0	5.0	4.9	5.0	0	5.0	4.9	3.7	4.9	5.0	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9307																			
				PIN NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
NTSC		PAL	REC		5.0	5.0	4.4	5.0	0	5.0	0	5.0	0	0	4.0	5.0	0	5.0	5.0	4.2	5.0	0	5.0	4.2
	PAL	NTSC	PLAY		4.8	4.9	4.7	4.9	0	0	0	4.9	0	0	3.9	4.9	4.9	0	4.9	3.8	4.9	3.9	4.9	3.7
PAL		SECAM	REC		5.0	5.0	5.0	4.9	0	0	0	5.0	5.0	0	3.9	5.0	4.9	0	4.9	3.8	4.9	3.9	4.9	3.7
	SECAM	PAL	PLAY		5.0	4.8	4.9	5.0	0	0	0	5.0	0	0	4.0	0	5.0	5.0	5.0	4.2	5.0	0	5.0	4.2

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9307			
				PIN NO.	61	62	63	64
NTSC		PAL	REC		2.2	2.5	0	5.0
	PAL	NTSC	PLAY		2.2	2.5	0	5.0
PAL		SECAM	REC		2.2	2.5	0	4.9
	SECAM	PAL	PLAY		2.2	2.5	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9308															
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC		5.0	0	3.6	0	5.0	0	4.5	0	5.0	0	0	5.0	0	5.0	0	0
	PAL	NTSC	PLAY		5.0	0	5.0	0	5.0	0.1	0	0	5.0	0	0	0	0	5.0	0	0
PAL		SECAM	REC		5.0	0	5.0	4.9	0	0.1	3.7	0	4.9	0	3.9	0.1	0	4.9	0	0
	SECAM	PAL	PLAY		5.0	0	5.0	0	5.0	0	4.5	0	5.0	0	0	5.0	0	5.0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9309															
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC		5.0	0	3.1	0	5.0	0	4.2	0	0	5.0	5.0	0	0	5.0	0	0.1
	PAL	NTSC	PLAY		5.0	0	5.0	0	5.0	0.1	3.8	0	5.0	0	0	5.0	0	4.9	0	0
PAL		SECAM	REC		5.0	5.0	0	0	5.0	0.1	3.8	0	5.0	0	0	0	0	5.0	0	0
	SECAM	PAL	PLAY		5.0	0	5.0	5.0	0	0	4.1	0	5.0	0	5.0	0	0	5.0	0	0

DRIVE C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9310															
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC		5.0	0	0	0	0	0	0	0	0	0	5.0	5.0	0	0	0	0
	PAL	NTSC	PLAY		5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PAL		SECAM	REC		5.0	0	0	5.0	0	0	0	0	0	0	0	0	0	0	0	0
	SECAM	PAL	PLAY		5.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC9311															
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NTSC		PAL	REC		4.9	5.0	5.0	5.0	5.0	5.0	5.0	0	5.0	5.0	5.0	5.0	4.5	5.0	4.9	5.0
	PAL	NTSC	PLAY		4.9	4.9	4.9	4.9	4.8	0	4.8	0	4.8	4.9	4.9	4.9	0	4.9	4.1	5.0
PAL		SECAM	REC		4.8	4.9	4.9	5.0	4.9	5.0	5.0	0	4.9	4.9	4.9	4.9	4.9	4.9	4.8	5.0
	SECAM	PAL	PLAY		4.9	5.0	5.0	5.0	5.0	5.0	4.9	0	4.9	5.0	4.7	5.0	4.9	5.0	4.9	5.0

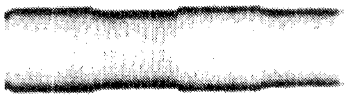
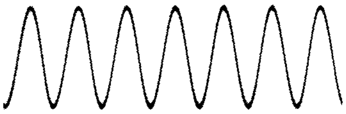
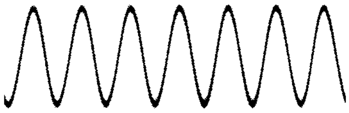
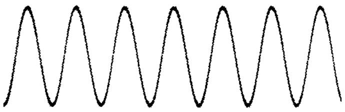
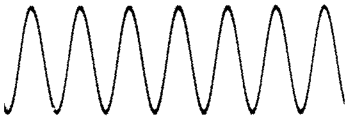
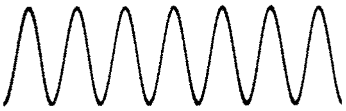
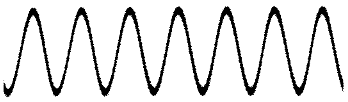
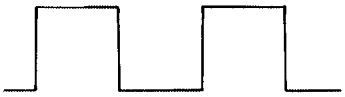
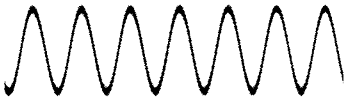
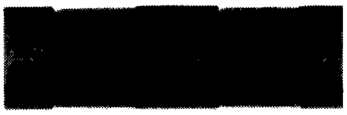
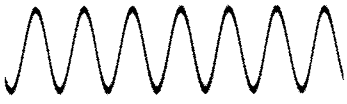
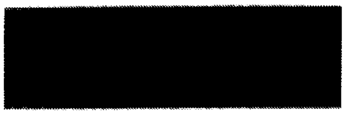
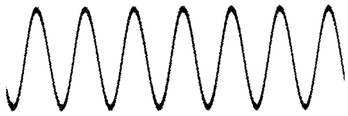
DRIVE C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q9301			Q9302			Q9303			Q9304			Q9305			Q9306		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	0.1	0.7	0	12.0	0	0	12.0	0	0	12.0	0	0	12.0	0	0	12.0	0
	PAL	NTSC	PLAY		0	12.0	0	0	0.1	0.7	0	12.0	0	0	12.0	0	0	0	0	0	12.0	0
PAL		SECAM	REC		0	12.0	0	0	11.9	0	0	12.0	0	0	12.0	0	0	0.1	0.7	0	12.0	0
	SECAM	PAL	PLAY		0	0.1	0.7	0	11.9	0	0	12.0	0	0	12.0	0	0	12.0	0	0	12.0	0

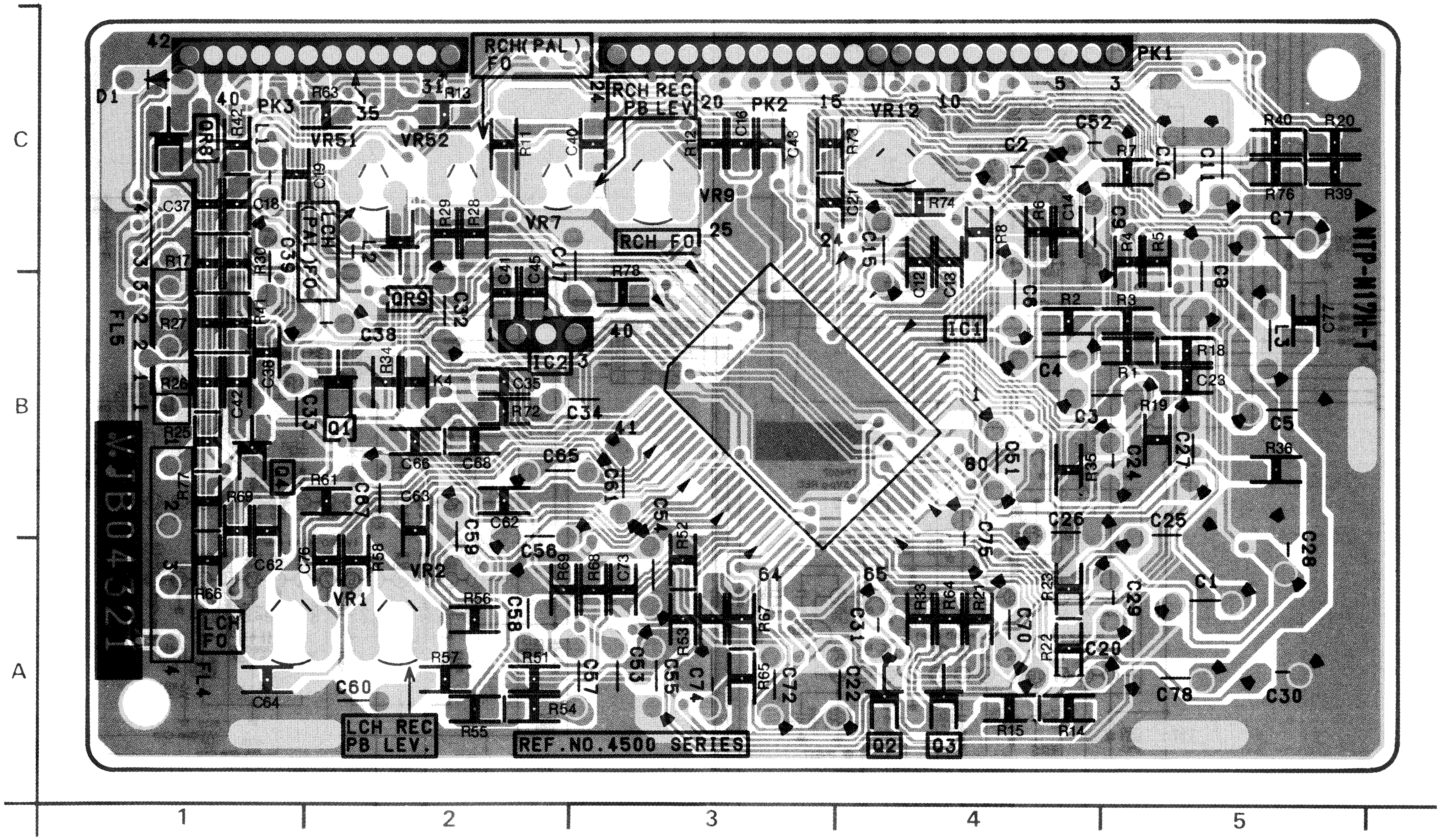
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9301			QR9302			QR9303			QR9304			QR9305			QR9306		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	2.6	3.4	0	3.0	0	0	0.1	4.2	0	12.0	0	0	4.3	0	0	0	3.9
	PAL	NTSC	PLAY		0	2.6	3.4	0	0	3.9	0	0.1	3.7	0	12.0	0	0	0.1	3.9	0	0.7	0
PAL		SECAM	REC		0	0.2	3.6	0	0	3.9	0	0.1	3.7	0	12.0	0	0	0.1	3.9	0	0	3.9
	SECAM	PAL	PLAY		0	3.6	4.4	0	0	3.9	0	0.1	4.2	0	12.0	0	0	4.2	0	0	0.1	3.9

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR9307			QR9308			QR9309		
				PIN NO.	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		0	5.0	0	0	0	3.7	0	5.0	0
	PAL	NTSC	PLAY		0	5.0	0	0	0	3.3	0	5.0	0
PAL		SECAM	REC		0	0	4.4	0	0	3.3	0	5.0	0
	SECAM	PAL	PLAY		0	5.0	0	0	0	3.7	0	0	0

WAVEFORM OF Hi-Fi AUDIO PACK PINS

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
3	 PLAY 100mVp-p	33	 REC/PLAY 150mVp-p
9	 REC 110mVp-p PLAY 120mVp-p	35	 REC/PLAY 320mVp-p
12	 REC/PLAY 0.35Vp-p	36	 REC/PLAY 330mVp-p
13	 REC/PLAY 100mVp-p	38	 REC/PLAY 5.0Vp-p
15	 REC/PLAY 100mVp-p	40	 PLAY 1.5Vp-p
19	 REC/PLAY 100mVp-p	41	 REC 130mVp-p
31	 REC/PLAY 150mVp-p		

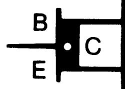
Hi-Fi AUDIO PACK C.B.A. (VEP04321A)

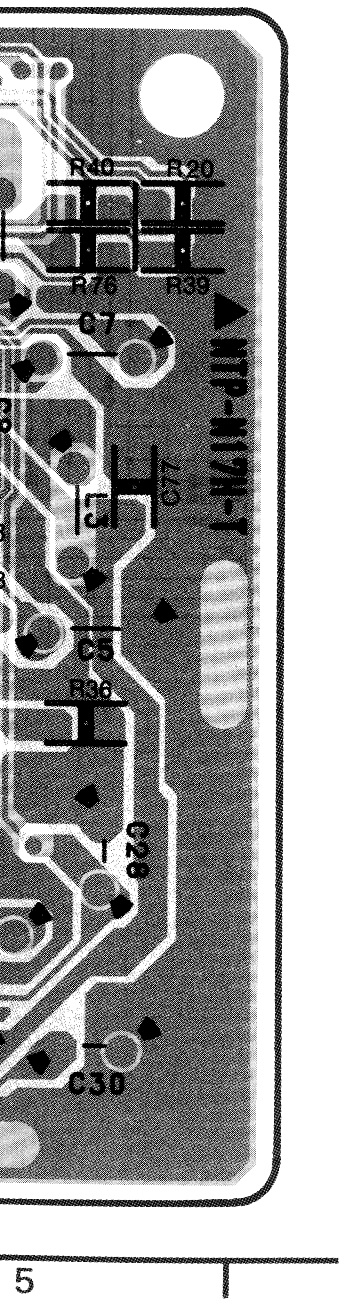

C
B
A
1
2
3
4
5
42
40
D1
PK3
R63
31
R13
35
RCH(PAL) FO
24
RCH REC PB LEV.
20
PK2
15
VR12
10
5
3
PK1
QR8
R42
VR51
VR52
R11
C40
R12
C16
C48
R73
C2
C52
R7
C10
C11
R40
R20
R76
R39
C37
C18
C19
LCH (PAL) FO
R29
R28
VR7
VR9
25
C21
R74
R6
C14
C9
R4
R5
C7
R17
R30
C39
L2
RCH FO
24
C15
C12
C13
R8
C8
NTP-N17N-T
FL5
R27
QR9
C32
C41
C45
C17
R78
C6
R2
R3
L3
C77
C38
1
40
IC1
R34
IC2
3
C4
R18
R1
C23
R26
C42
C36
C33
K4
C35
R72
C34
C3
R19
C5
R25
Q1
41
C27
C24
R36
C66
C68
C65
80
Q51
R35
Q4
R77
R61
C67
C63
C61
R69
C62
C54
C26
C25
C28
C59
R52
C75
C62
C76
R68
VR2
C56
R69
R68
C73
64
65
R23
R33
R64
R21
C29
C1
R66
VR1
R56
C58
R67
C31
C70
LCH FO
R63
R22
C20
R57
R51
C57
C53
C55
C74
R65
C72
C22
C64
C60
R54
C78
C30
FL4
VJB04321
LCH REC PB LEV.
R55
REF.NO.4500 SERIES
Q2
Q3
R15
R14

Hi-Fi AUDIO PACK C.B.	
Transistor	
Q4501	B-2
Q4502	A-4
Q4503	A-4
Q4504	B-1
Transistor & Resistor	
QR4508	C-1
QR4509	B-2
Integrated Circuit	
IC4501	B-4
IC4502	B-2
Adjustment	
VR4501	A-2
VR4502	A-2
VR4507	C-2
VR4509	C-3
VR4512	C-4
VR4551	C-2
VR4552	C-2

ADDRESS INFORMATION

TRANSISTOR INFO

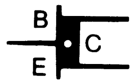



R40
R20
R76
R39
Q7
NTP-N17H-T
L3
C77
C5
R36
C28
C30
5

HI-FI AUDIO PACK C.B.A.	
Transistor	
Q4501	B-2
Q4502	A-4
Q4503	A-4
Q4504	B-1
Transistor & Resistor	
QR4508	C-1
QR4509	B-2
Integrated Circuit	
IC4501	B-4
IC4502	B-2
Adjustment	
VR4501	A-2
VR4502	A-2
VR4507	C-2
VR4509	C-3
VR4512	C-4
VR4551	C-2
VR4552	C-2

ADDRESS INFORMATION

TRANSISTOR INFORMATION

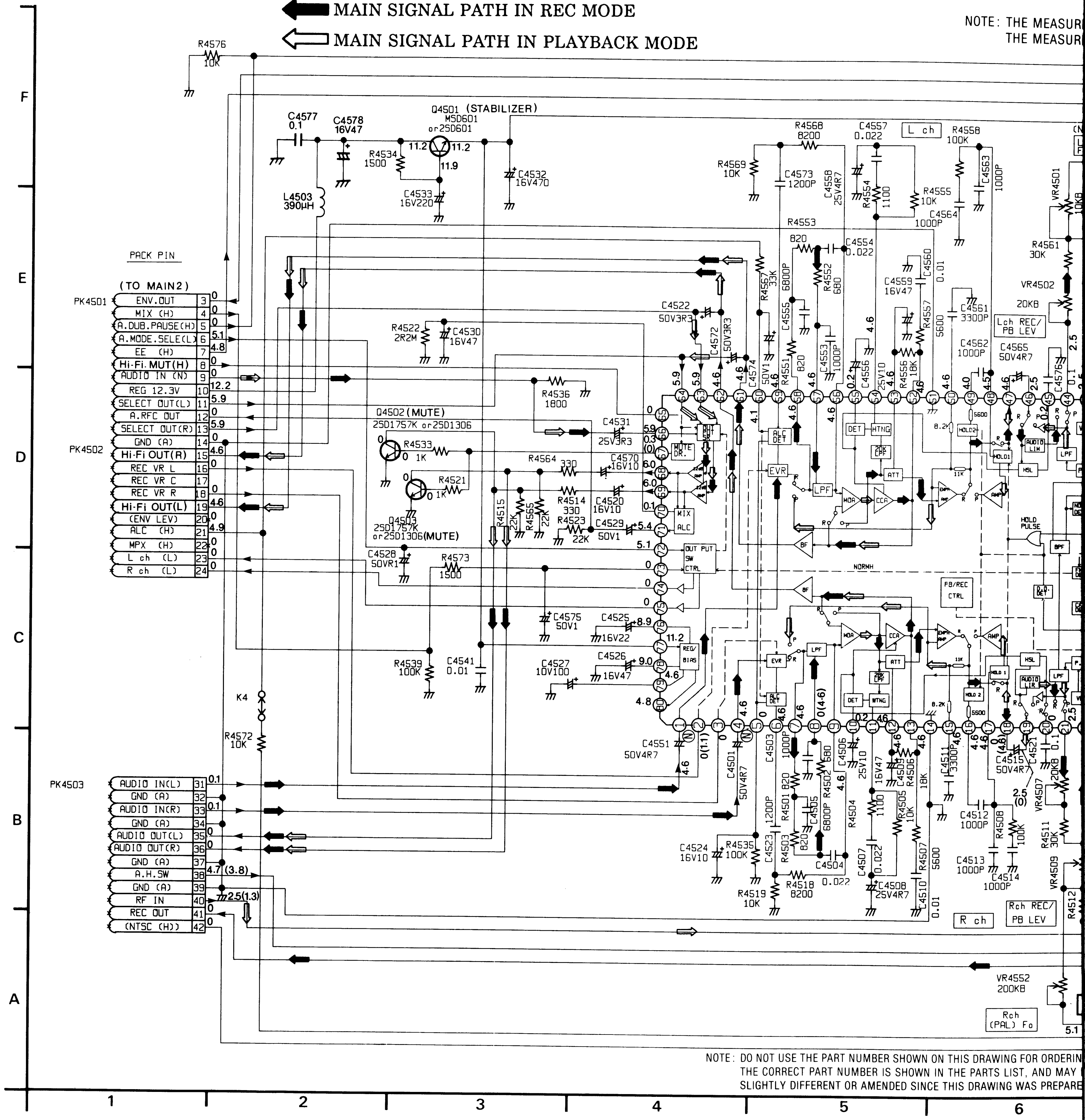


Hi-Fi AUDIO PACK SCHEMATIC DIAGRAM

⬅ MAIN SIGNAL PATH IN REC MODE

⇦ MAIN SIGNAL PATH IN PLAYBACK MODE

NOTE: THE MEASUR
THE MEASUR

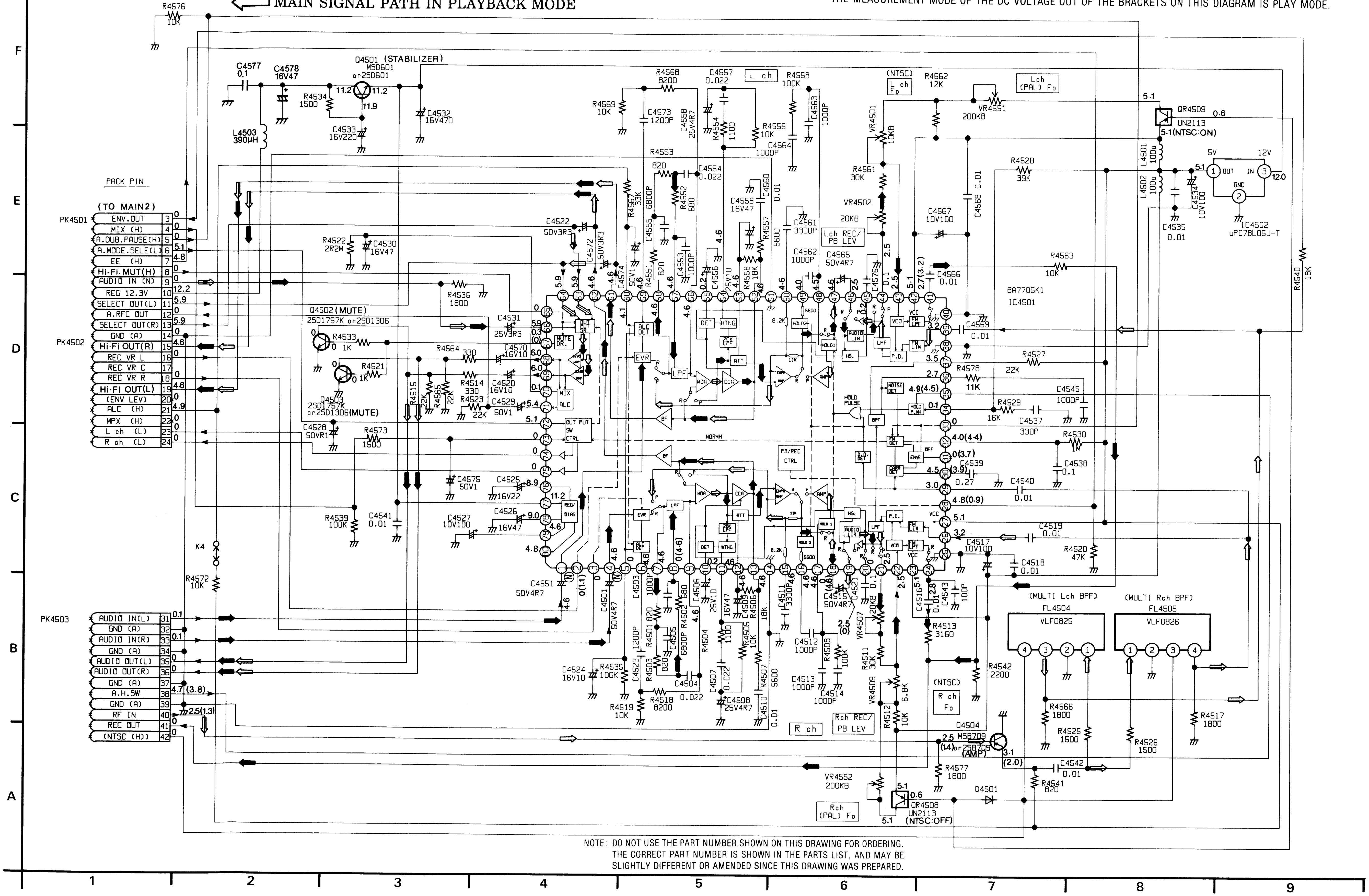

F
E
D
C
B
A
1
2
3
4
5
6
R4576 10K
C4577 0.1
C4578 16V47
Q4501 (STABILIZER) MSD601 or 2SD601
R4534 1500
C4533 16V220
C4532 16V470
L4503 390μH
PACK PIN
(TO MAIN2)
PK4501
ENV.OUT 3
MIX (H) 4
A.DUB.PAUSE(H) 5
A.MODE.SELE(L) 6
EE (H) 7
Hi-Fi.MUT(H) 8
AUDIO IN (N) 9
REG 12.3V 10
SELECT OUT(L) 11
A.RFC OUT 12
SELECT OUT(R) 13
GND (A) 14
PK4502
Hi-Fi OUT(R) 15
REC VR L 16
REC VR C 17
REC VR R 18
Hi-Fi OUT(L) 19
(ENV LEV) 20
ALC (H) 21
MPX (H) 22
L ch (L) 23
R ch (L) 24
PK4503
AUDIO IN(L) 31
GND (A) 32
AUDIO IN(R) 33
GND (A) 34
AUDIO OUT(L) 35
AUDIO OUT(R) 36
GND (A) 37
A.H.SW 38
GND (A) 39
RF IN 40
REC OUT 41
(NTSC (H)) 42
Q4502 (MUTE) 2SD1757K or 2SD1306
Q4503 2SD1757K or 2SD1306 (MUTE)
R4522 2R2M
C4530 16V47
R4536 1800
R4533 1K
R4521 1K
R4564 330
R4514 330
R4523 22K
C4520 16V10
C4529 50V1
C4528 50VR1
R4573 1500
C4531 25V3R3
C4570 16V10
C4522 50V3R3
C4572 50V3R3
C4575 50V1
C4525 16V22
C4527 10V100
C4526 16V47
R4539 100K
C4541 0.01
R4572 10K
K4
C4551 50V4R7
MUTE DR.
MIX
ALC
OUT PUT SW CTRL
REG/ BIAS
EVR
ALC DET
LPF
NOR
CCA
ATT
BPF
DET
HTNG
MUTE
NORMH
PB/REC CTRL
HOLD PULSE
Lch REC/ PB LEV
Rch REC/ PB LEV
L ch
R ch
R4568 8200
C4557 0.022
R4558 100K
R4569 10K
C4573 1200P
C4558 25V4R7
R4554 1100
R4555 10K
C4563 1000P
C4564 1000P
R4553 820
C4554 0.022
R4552 680
C4555 6800P
C4559 16V47
C4560 0.01
R4557 5600
R4556 18K
C4561 3300P
C4562 1000P
C4565 50V4R7
VR4501 10KB
R4561 30K
VR4502 20KB
C4501 50V4R7
C4503 1200P
R4501 820
R4502 680
C4505 6800P
C4506 25V10
R4504 1100
R4505 10K
R4506 18K
R4507 5600
R4510 0.01
C4511 3300P
C4512 1000P
C4513 1000P
C4514 1000P
C4515 50V4R7
VR4507 20KB
R4508 100K
R4511 30K
VR4509
R4512
C4523 1200P
C4524 16V10
R4535 100K
R4503 8200
R4519 10K
R4518 8200
C4504 0.022
C4507 0.022
C4508 25V4R7
VR4552 200KB
Rch (PAL) Fo

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERIN
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARE

Hi-Fi AUDIO PACK SCHEMATIC DIAGRAM

➡ MAIN SIGNAL PATH IN REC MODE
⇨ MAIN SIGNAL PATH IN PLAYBACK MODE

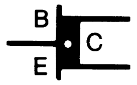
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAY MODE.


F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
PACK PIN
(TO MAIN2)
PK4501
ENV.OUT 3
MIX (H) 4
A.DUB.PAUSE(H) 5
A.MODE.SELE(L) 6
EE (H) 7
Hi-Fi.MUT(H) 8
AUDIO IN (N) 9
REG 12.3V 10
SELECT OUT(L) 11
A.RFC OUT 12
SELECT OUT(R) 13
GND (A) 14
PK4502
Hi-Fi OUT(R) 15
REC VR L 16
REC VR C 17
REC VR R 18
Hi-Fi OUT(L) 19
(ENV LEV) 20
ALC (H) 21
MPX (H) 22
L ch (L) 23
R ch (L) 24
PK4503
AUDIO IN(L) 31
GND (A) 32
AUDIO IN(R) 33
GND (A) 34
AUDIO OUT(L) 35
AUDIO OUT(R) 36
GND (A) 37
A.H.SW 38
GND (A) 39
RF IN 40
REC OUT 41
(NTSC (H)) 42
R4576 10K
C4577 0.1
C4578 16V47
Q4501 (STABILIZER) MSD601 or2SD601
R4534 1500
L4503 390μH
C4533 16V220
C4532 16V470
Q4502(MUTE) 2SD1757K or2SD1306
R4533 1K
Q4503 2SD1757K or2SD1306(MUTE)
R4521 1K
R4522 2R2M
C4530 16V47
R4536 1800
R4564 330
C4531 25V3R3
C4570 16V10
R4514 330
C4520 16V10
R4523 22K
C4529 50V1
R4515 22K
R4555 22K
C4528 50VR1
R4573 1500
C4575 50V1
C4525 16V22
C4527 10V100
C4526 16V47
R4539 100K
C4541 0.01
K4
R4572 10K
C4551 50V4R7
C4522 50V3R3
C4572 50V3R3
C4574 50V1
R4569 10K
R4568 8200
C4573 1200P
C4558 25V4R7
C4557 0.022
L ch
R4558 100K
C4563 1000P
R4554 1100
R4555 10K
C4564 1000P
R4553 820
C4554 0.022
R4552 680
R4567 33K
C4555 6800P
R4551 820
C4553 1000P
C4556 25V10
C4559 16V47
C4560 0.01
R4557 5600
R4556 18K
C4561 3300P
C4562 1000P
C4565 50V4R7
Lch REC/PB LEV
(NTSC) L ch Fo
R4562 12K
VR4501 10KB
R4561 30K
VR4502 20KB
VR4551 200KB
Lch (PAL) Fo
C4567 10V100
C4568 0.01
R4528 39K
R4563 10K
C4566 0.01
BA7705K1
IC4501
C4569 0.01
R4527 22K
R4578 11K
R4529 16K
C4537 330P
C4545 1000P
R4530 1M
C4538 0.1
C4539 0.27
C4540 0.01
C4519 0.01
C4517 10V100
C4518 0.01
R4520 47K
QR4509 UN2113 5.1(NTSC:ON)
L4501 100μ
L4502 100μ
C4534 10V100
C4535 0.01
IC4502 uPC78L05J-T
5V 12V OUT IN GND
R4540 18K
MUTE DR.
MIX
ALC
OUT PUT SW CTRL
REG/BIAS
EVR
LPF
NOR
CCA
ATT
DET
HTNG
BPF
NORMH
FB/REC CTRL
HOLD PULSE
NOISE DET
VCO
P.D.
LIM
HSL
AUDIO LIM
ENVE
CARR DET
C4501 50V4R7
C4503 1200P
R4501 820
C4523 1000P
R4503 820
C4505 6800P
R4502 680
C4506 25V10
C4524 16V10
R4535 100K
R4519 10K
R4518 8200
C4504 0.022
R4504
C4507 0.022
R4505 10K
R4506 18K
C4509 16V47
R4507 5600
C4508 25V4R7
C4510 0.01
C4511 3300P
C4512 1000P
C4513 1000P
C4514 1000P
C4515 50V4R7
R4508 100K
VR4507 20KB
R4511 30K
R4512 10K
VR4509 6.8K
R ch
Rch REC/PB LEV
C4516 0.01
C4543 0.01
100P
R4513 3160
R4542 2200
(NTSC) R ch Fo
Q4504 MSB709 or2SB709 (AMP)
R4577 1800
C4542 0.01
R4541 820
D4501
VR4552 200KB
Rch (PAL) Fo
QR4508 UN2113 (NTSC:OFF)
(MULTI Lch BPF) FL4504 VLF0825
(MULTI Rch BPF) FL4505 VLF0826
R4566 1800
R4525 1500
R4526 1500
R4517 1800

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

HEAD AMP PACK C.B.A. (VEP05159A)

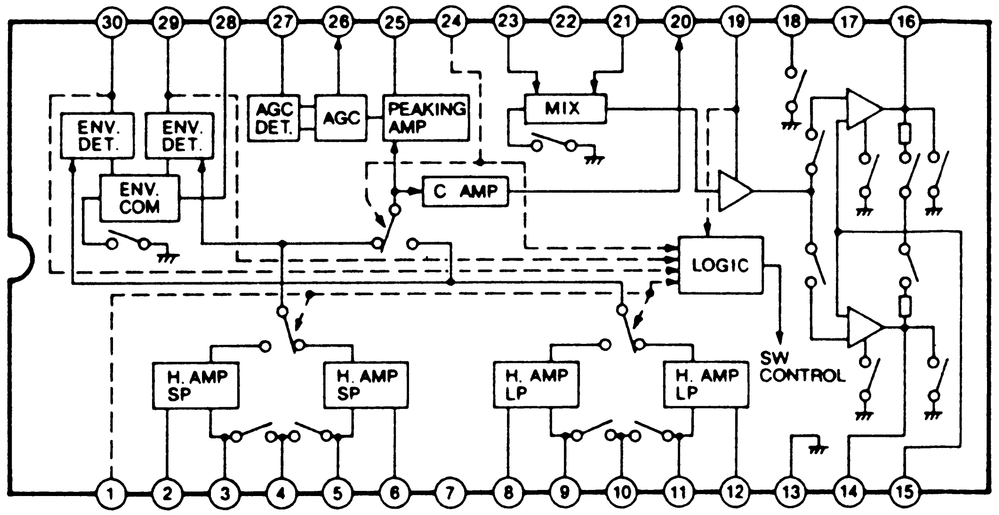
TRANSISTOR INFORMATION



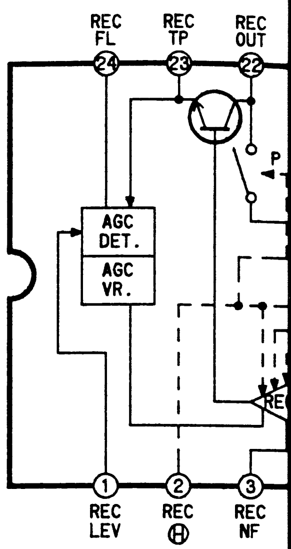
HEAD AMP C.B.A.		
Transistor		
Q501	A-6	Ⓕ
Transistor & Resistor		
QR501	A-2	Ⓒ
Integrated Circuit		
IC501	A-2	Ⓒ
IC501	A-6	Ⓕ
IC551	A-5	Ⓕ
IC552	A-3	Ⓒ
Test Point		
TP507	A-2	Ⓒ
TP507	A-5	Ⓕ
TP508	A-2	Ⓒ
TP508	A-6	Ⓕ
TP4507	A-3	Ⓒ
TP4507	A-5	Ⓕ
TP4517	A-3	Ⓒ
TP4517	A-4	Ⓕ
Adjustment		
VR501	A-2	Ⓒ
VR501	A-6	Ⓕ
Connector		
P502	B-2	Ⓒ
P502	B-6	Ⓕ
P551	A-4	Ⓒ
P551	A-4	Ⓕ
P552	A-1	Ⓒ
P552	A-7	Ⓕ

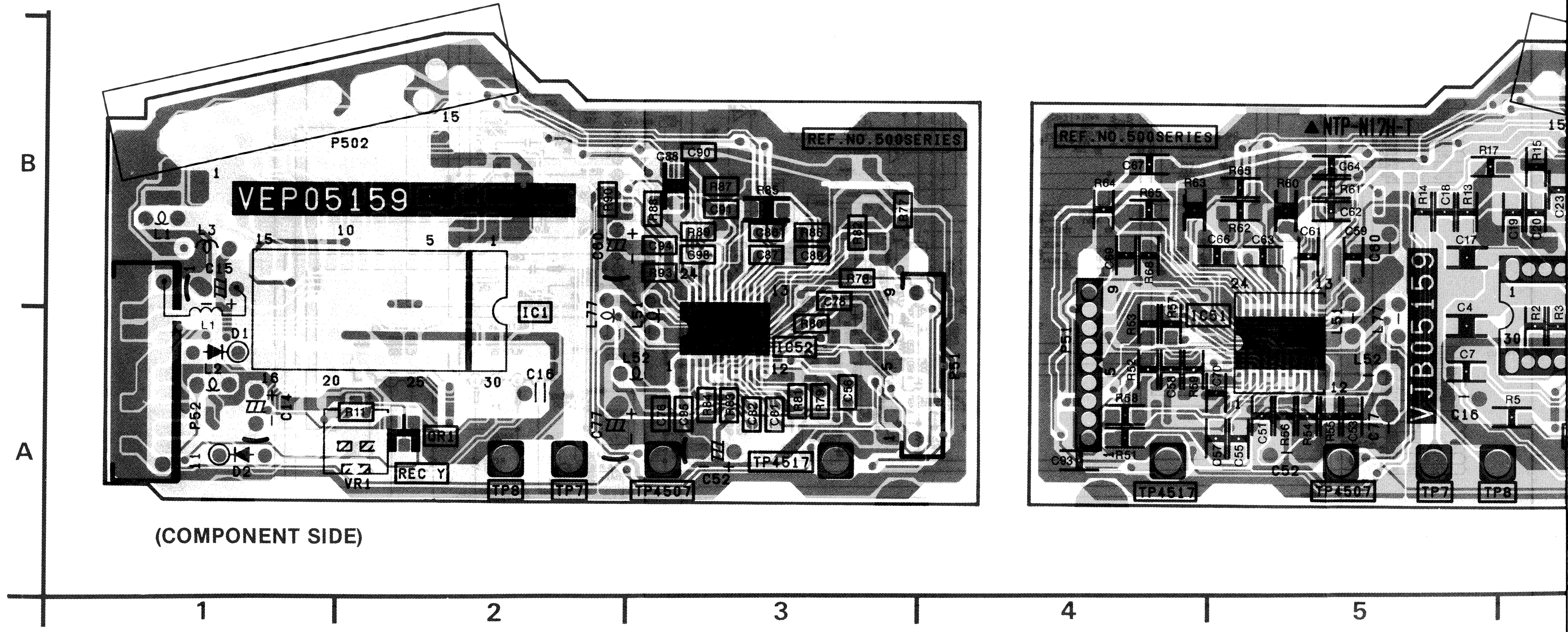
ADDRESS INFORMATION
Ⓒ... COMPONENT SIDE
Ⓕ... FOIL SIDE

IC501 AN3334K


30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
ENV. DET.
ENV. DET.
ENV. COM
AGC DET.
AGC
PEAKING AMP
MIX
C AMP
LOGIC
SW CONTROL
H. AMP SP
H. AMP SP
H. AMP LP
H. AMP LP
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

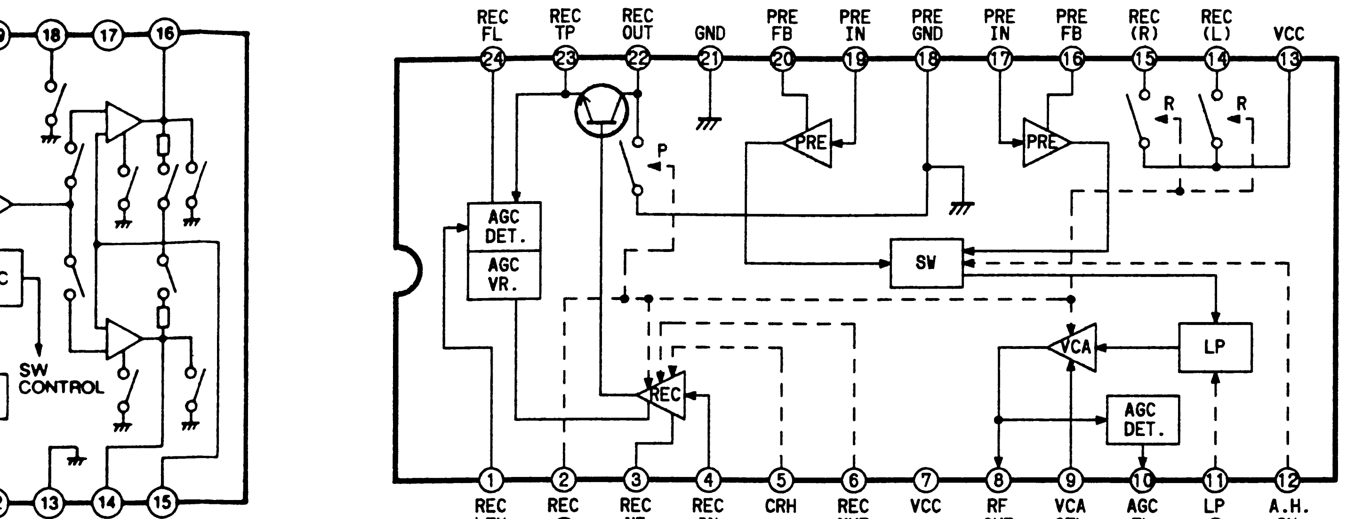
IC551, IC552 BA774

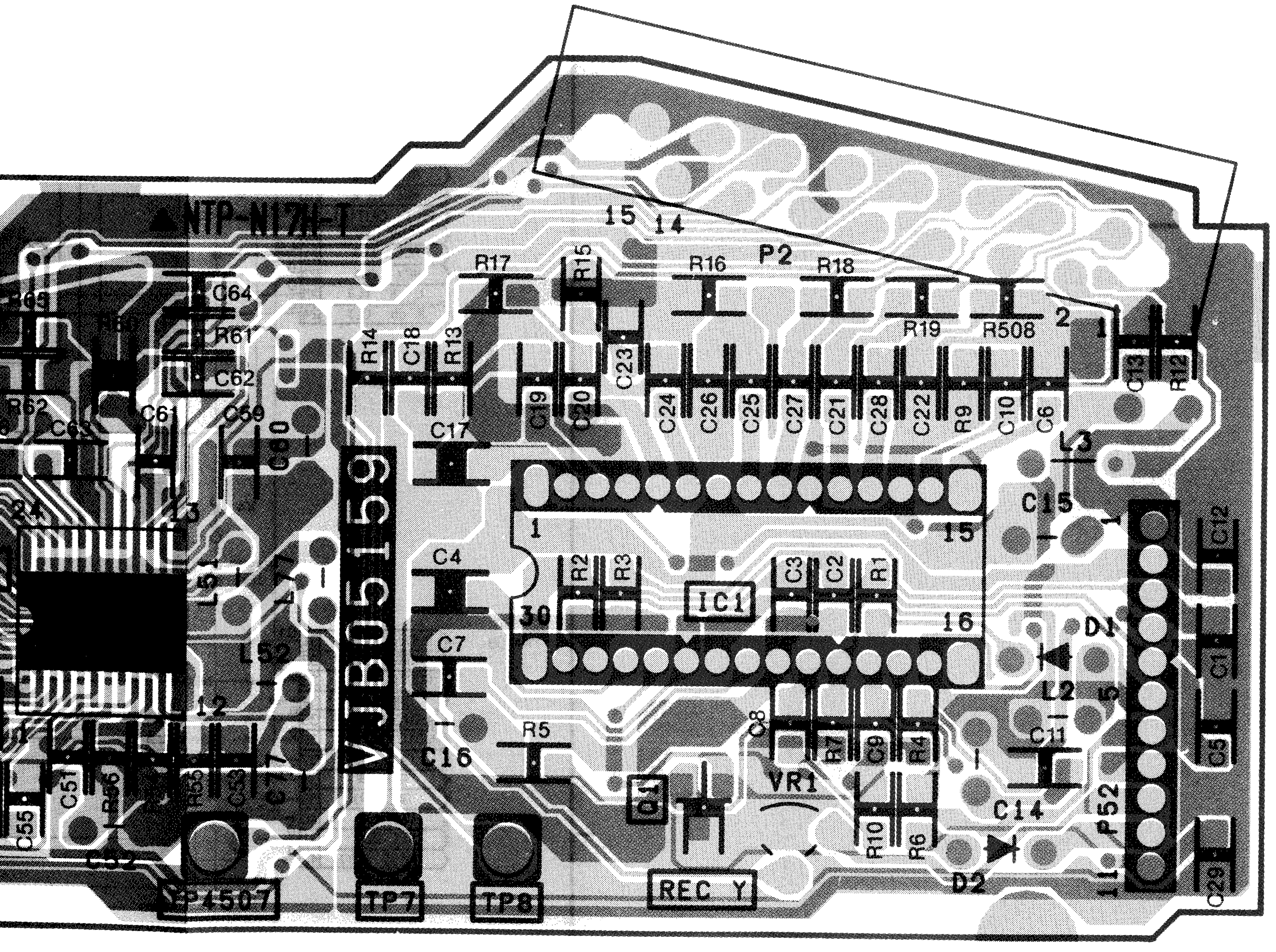

REC FL
REC TP
REC OUT
24
23
22
AGC DET.
AGC VR.
P
REC
1
2
3
REC LEV
REC Ⓗ
REC NF


B
A
1
2
3
4
5
P502
15
1
VEP05159
10
5
IC1
L1
L3
C15
L2
D1
D2
P52
16
20
25
30
C16
C14
R11
QR1
VR1
REC Y
TP8
TP7
TP4507
C52
TP4517
C88
C90
R87
R85
C91
C89
C86
R86
C87
C85
C94
C98
R93
R90
C80
L77
L51
L52
IC52
R78
C78
R80
P51
C76
C95
R84
R83
C82
C81
R81
R79
C58
R82
C77
REF. NO. 500SERIES
NTP-N17H-T
C67
R64
R65
R63
R66
R60
C64
R61
C62
R62
C66
C63
C61
C59
C60
R68
P51
R53
R57
IC61
R52
C58
R59
C70
R58
R51
C93
C57
C55
C51
R56
R54
R55
C53
C17
VJB05159
R17
R15
R14
C18
R13
C23
C19
C20
C4
R2
R3
C7
R5
C16
TP7
TP8

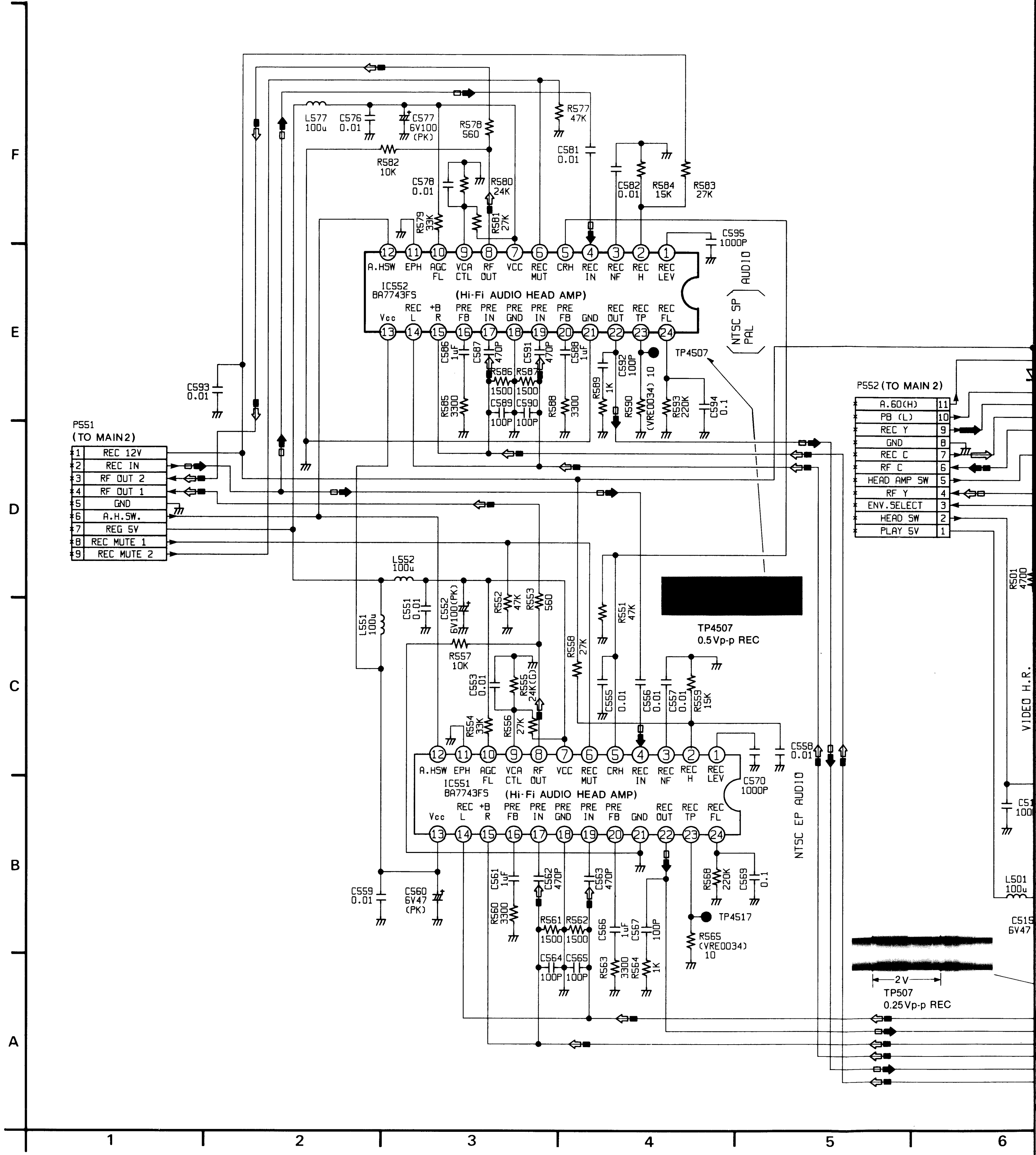
(COMPONENT SIDE)

IC551, IC552 BA7743FS


REC FL
REC TP
REC OUT
GND
PRE FB
PRE IN
PRE GND
PRE IN
PRE FB
REC (R)
REC (L)
VCC
AGC DET.
AGC VR.
PRE
SW
VCA
LP
REC
AGC DET.
REC LEV
REC Ⓗ
REC NF
REC IN
CRH
REC MUT
VCC
RF OUT
VCA CTL
AGC FL
LP Ⓗ
A.H. SW
SW CONTROL

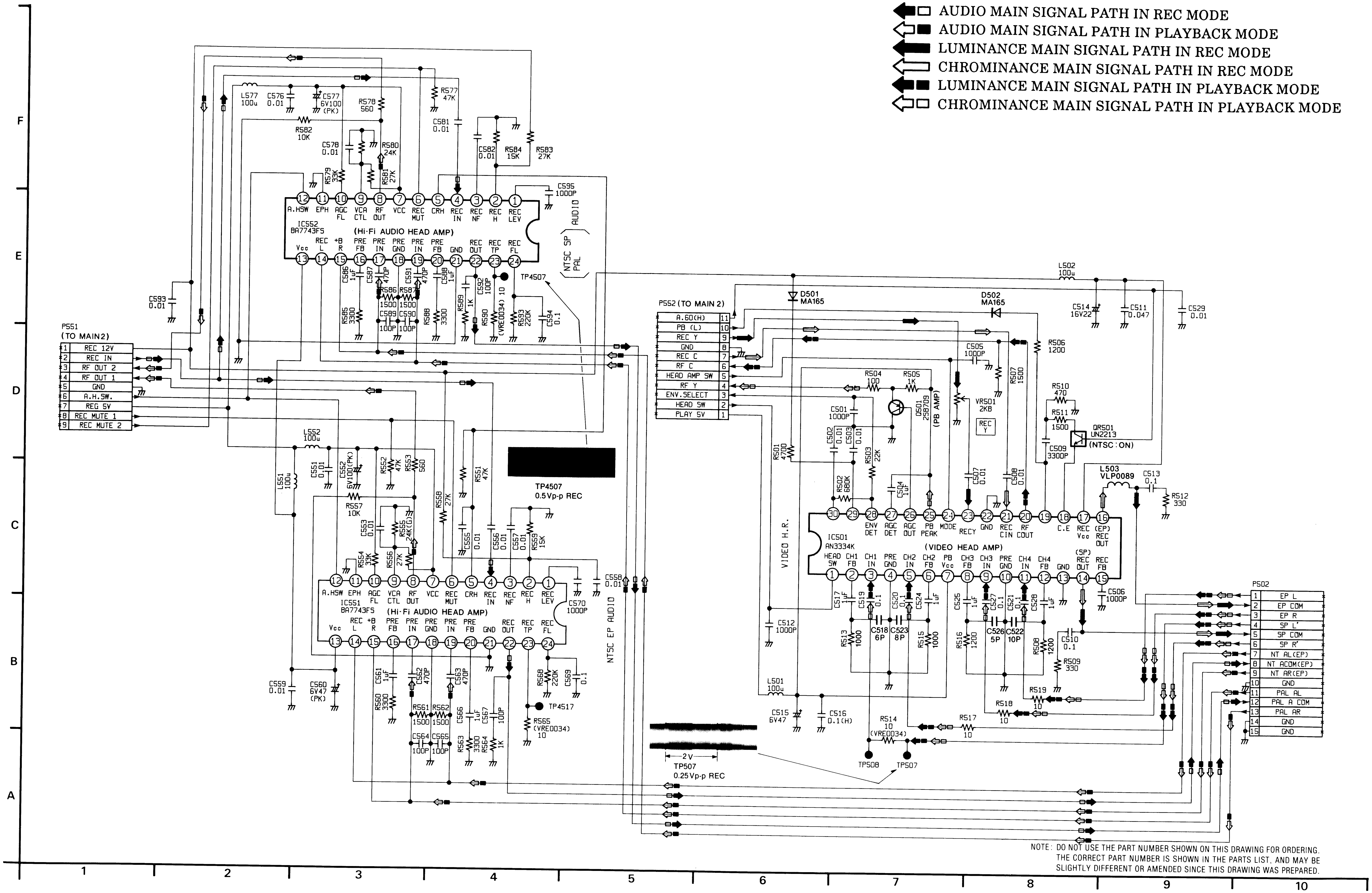

NTP-N17H-T
VJB05159
IC1
P2
P52
REC Y
TP4507
TP7
TP8
VR1
D1
D2
(FOIL SIDE)

HEAD AMP PACK SCHEMATIC DIAGRAM


IC552
BA7743FS
(Hi-Fi AUDIO HEAD AMP)
IC551
BA7743FS
(Hi-Fi AUDIO HEAD AMP)
AUDIO
NTSC SP PAL
NTSC EP AUDIO
PS551 (TO MAIN2)
1 REC 12V
2 REC IN
3 RF OUT 2
4 RF OUT 1
5 GND
6 A.H.SW.
7 REG 5V
8 REC MUTE 1
9 REC MUTE 2
PS52 (TO MAIN 2)
11 A.6O(H)
10 PB (L)
9 REC Y
8 GND
7 REC C
6 RF C
5 HEAD AMP SW
4 RF Y
3 ENV.SELECT
2 HEAD SW
1 PLAY 5V
TP4507
TP4507 0.5Vp-p REC
TP4517
TP507 0.25Vp-p REC
2V
VIDEO H.R.
F
E
D
C
B
A
1
2
3
4
5
6

REC (L)
VCC
⑭
⑬
R
LP
⑪
⑫
A.H. SW
C12
C11
C5
C29
7

HEAD AMP PACK SCHEMATIC DIAGRAM


PS51 (TO MAIN2)
1 REC 12V
2 REC IN
3 RF OUT 2
4 RF OUT 1
5 GND
6 A.H.SW.
7 REG 5V
8 REC MUTE 1
9 REC MUTE 2
IC552 BA7743FS
(Hi-Fi AUDIO HEAD AMP)
IC551 BA7743FS
(Hi-Fi AUDIO HEAD AMP)
A.HSW EPH AGC FL VCA CTL RF OUT VCC REC MUT CRH REC IN REC NF REC H REC LEV
Vcc REC L +B R PRE FB PRE IN PRE GND PRE IN PRE FB GND REC OUT REC TP REC FL
NTSC SP PAL AUDIO
NTSC EP AUDIO
TP4507
TP4507 0.5Vp-p REC
TP4517
L577 100u
C576 0.01
C577 6V100 (PK)
R578 560
R577 47K
R582 10K
C578 0.01
R580 24K
R579 33K
R581 27K
C581 0.01
C582 0.01
R584 15K
R583 27K
C595 1000P
C593 0.01
R585 3300
C586 1uF
C587 470P
R586 1500
R587 1500
C589 100P
C590 100P
C591 470P
R588 3300
C588 1uF
R589 1K
R590 (VRE0034) 10
C592 100P
R593 220K
C594 0.1
L552 100u
L551 100u
C551 0.01
C552 6V100(PK)
R557 10K
R552 47K
R553 560
C553 0.01
R554 33K
R555 24K(G)
R556 27K
R558 27K
R551 47K
C555 0.01
C556 0.01
C557 0.01
R559 15K
C558 0.01
C570 1000P
C559 0.01
C560 6V47 (PK)
R560 3300
C561 1uF
C562 470P
C563 470P
R561 1500
R562 1500
C564 100P
C565 100P
C566 1uF
C567 100P
R563 3300
R564 1K
R568 220K
C569 0.1
R565 (VRE0034) 10
PS52 (TO MAIN 2)
11 A.60(H)
10 PB (L)
9 REC Y
8 GND
7 REC C
6 RF C
5 HEAD AMP SW
4 RF Y
3 ENV.SELECT
2 HEAD SW
1 PLAY 5V
D501 MA165
D502 MA165
L502 100u
C514 16V22
C511 0.047
C529 0.01
R506 1200
C505 1000P
R507 1500
VR501 2KB
REC Y
R504 100
R505 1K
QS01 2SB709 (PB AMP)
C501 1000P
C502 0.01
C503 0.01
R503 22K
R501 4700
R502 680K
C504 1uF
C507 0.01
C508 0.01
R510 470
R511 1500
C509 3300P
QRS01 UN2213 (NTSC:ON)
L503 VLP0089
C513 0.1
R512 330
IC501 AN3334K
(VIDEO HEAD AMP)
VIDEO H.R.
ENV DET AGC DET AGC OUT PB PEAK MODE RECY GND REC CIN RF COUT C.E REC Vcc (EP) REC OUT
HEAD SW CH1 FB CH1 IN PRE GND CH2 IN CH2 FB PB Vcc CH3 FB CH3 IN PRE GND CH4 IN CH4 FB GND (SP) REC OUT REC FB
C506 1000P
C512 1000P
C517 1uF
C519 0.1
C520 0.1
C524 1uF
C525 1uF
C527 0.1
C521 0.1
C528 1uF
R513 1000
C518 6P
C523 8P
R515 1000
R516 1200
C526 5P
C522 10P
R508 1200
C510 0.1
R509 330
R519 10
R518 10
R517 10
R514 10 (VRE0034)
L501 100u
C515 6V47
C516 0.1(H)
TP508
TP507
2V
TP507 0.25Vp-p REC
PS02
1 EP L
2 EP COM
3 EP R
4 SP L'
5 SP COM
6 SP R'
7 NT AL(EP)
8 NT ACOM(EP)
9 NT AR(EP)
10 GND
11 PAL AL
12 PAL A COM
13 PAL AR
14 GND
15 GND
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9
10

◀■□ AUDIO MAIN SIGNAL PATH IN REC MODE

◁□■ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

◀■■ LUMINANCE MAIN SIGNAL PATH IN REC MODE

◁□□ CHROMINANCE MAIN SIGNAL PATH IN REC MODE

◀■■ LUMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE

◁□□ CHROMINANCE MAIN SIGNAL PATH IN PLAYBACK MODE

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
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SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

HEAD AMP PACK C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC501																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		5.0	0	0	0	0	0	0.4	0	0	0	0	0	0	6.2	6.1	6.1	11.8	0	2.9	0
	PAL	NTSC	PLAY		4.9	0.8	0.7	0	0.7	0.8	5.2	0.8	0.7	0	0.7	0.8	0	0	0	0	0.1	0.1	0.7	2.3
PAL		SECAM	REC		5.0	0	0	0	0	0	0.4	0	0	0	0	0	0	6.2	6.1	6.1	11.8	0	2.9	0
	SECAM	PAL	PLAY		4.9	0.8	0.7	0	0.7	0.8	5.2	0.8	0.7	0	0.7	0.8	0	0	0	0	0.1	0	0.7	2.3

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC501									
				PIN NO.	21	22	23	24	25	26	27	28	29	30
NTSC		PAL	REC		4.9	0	4.9	0	0.4	0.1	0.2	1.1	11.7	3.9
	PAL	NTSC	PLAY		0	0	0	0	5.2	2.0	3.4	4.6	2.3	2.4
PAL		SECAM	REC		4.9	0	4.9	0	0.4	0.1	0	1.1	11.7	3.9
	SECAM	PAL	PLAY		0	0	0	0	5.2	2.0	3.4	4.9	2.4	2.4

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC551																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		1.3	4.3	1.3	2.8	1.7	4.1	4.9	3.7	2.3	4.9	0	5.0	4.6	3.8	3.8	0	0	0	0	0
	PAL	NTSC	PLAY		1.3	0.3	0.5	2.9	1.6	4.1	4.9	2.9	2.4	4.9	0	5.0	5.0	0	0	0.8	0.7	0	0.7	0.8
PAL		SECAM	REC		1.3	4.3	1.3	2.8	1.7	4.1	4.9	3.7	2.3	4.9	0	5.0	4.6	3.8	3.8	0	0	0	0	0
	SECAM	PAL	PLAY		1.3	0.3	0.5	2.9	1.6	4.1	4.9	2.9	2.4	4.9	0	5.0	5.0	0	0	0.8	0.7	0	0.7	0.2

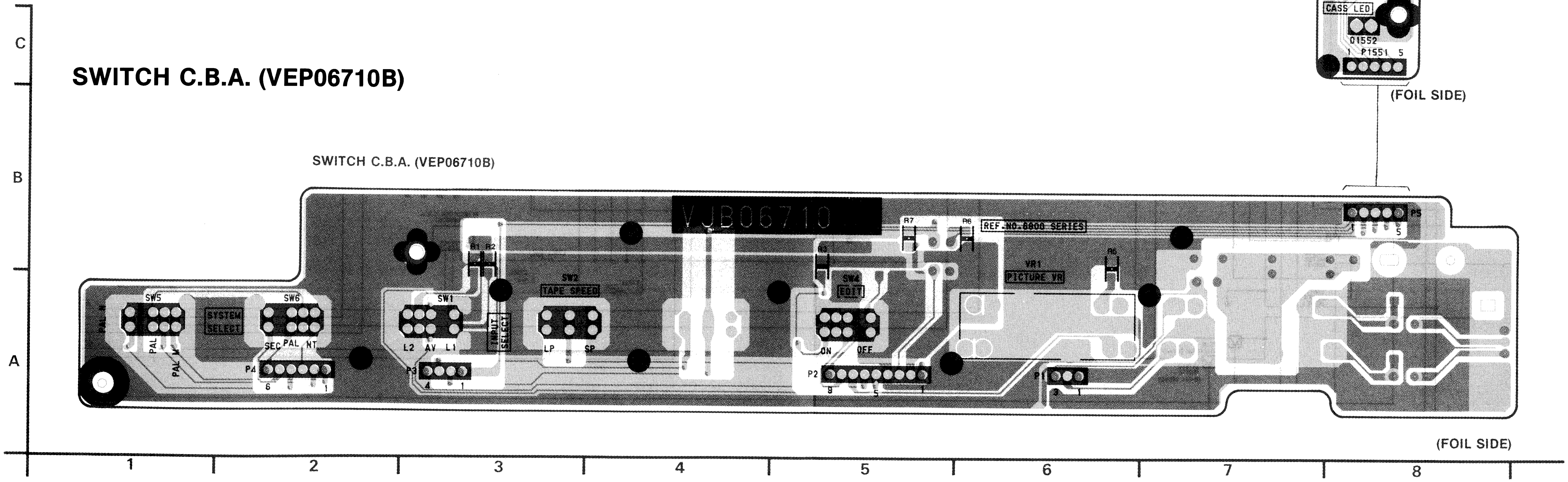
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC551			
				PIN NO.	21	22	23	24
NTSC		PAL	REC		0	3.7	0.5	0
	PAL	NTSC	PLAY		0	0	0	0
PAL		SECAM	REC		0	3.7	0.5	0
	SECAM	PAL	PLAY		0	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC552																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		1.3	4.3	1.4	2.8	1.7	0.1	4.9	3.7	0	4.9	0	4.9	4.6	3.8	3.8	0	0	0	0	0
	PAL	NTSC	PLAY		1.3	0.3	0.6	2.9	1.6	4.2	4.9	2.7	2.3	4.9	0	4.9	5.0	0	0	0.8	0.7	0	0.7	0.8
PAL		SECAM	REC		1.3	0	1.4	2.8	1.7	0.1	0	0	2.3	0	0	5.0	4.6	3.8	3.8	0	0	0	0	0
	SECAM	PAL	PLAY		1.3	0.3	0	0	1.6	0	0	0	2.3	4.9	0	4.9	5.0	0	0	0.8	0.7	0	0.7	0.8

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC552			
				PIN NO.	21	22	23	24
NTSC		PAL	REC		0	3.7	0.6	0.7
	PAL	NTSC	PLAY		0	0	0	0
PAL		SECAM	REC		0	3.7	0.6	0.7
	SECAM	PAL	PLAY		0	0	0	0

SWITCH C.B.A. (VEP06710B)

SWITCH C.B.A. (VEP06710B)


VJB06710
SW5
SW6
SYSTEM SELECT
PAL N
PAL
PAL M
SEC
PAL
NT
P4
6
1
R1
R2
SW1
L2
AV
L1
INPUT SELECT
P3
4
1
SW2
TAPE SPEED
LP
SP
R3
SW4
EDIT
ON
OFF
P2
9
5
1
R7
R6
REF.NO.6800 SERIES
VR1
PICTURE VR
R5
P1
3
1
P5
1
5
C
B
A
1
2
3
4
5
6
7
8

(FOIL SIDE)

HEAD AMP PACK C.B.A. TRANSISTORs DC VOLTAGE CHART

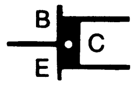
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q501		
				PIN NO.	E	C	B
NTSC		PAL	REC		0.4	0	0.1
	PAL	NTSC	PLAY		2.7	0	2.0
PAL		SECAM	REC		0.4	0	0.1
	SECAM	PAL	PLAY		2.7	0	2.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR501		
				PIN NO.	E	C	B
NTSC		PAL	REC		0	0	0.1
	PAL	NTSC	PLAY		0.1	0	0.1
PAL		SECAM	REC		0	0	0
	SECAM	PAL	PLAY		0	0	0

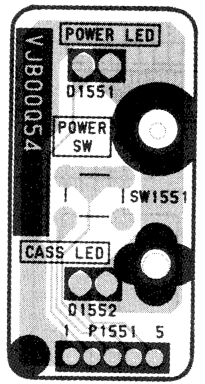
SWITCH C.B.A.	
Adjustment	
VR6801	B-6
VR6802	A-7
Connector	
P1551	C-8
P6801	A-6
P6802	A-5
P6803	A-3
P6804	A-2
P6805	B-8
PJ6401	C-6
PJ6801	A-8

ADDRESS INFORMATION

TRANSISTOR INFORMATION



LED C.B.A. (VEP00Q54A)


VJB00054
POWER LED
D1551
POWER SW
SW1551
CASS LED
D1552
1
P1551
5

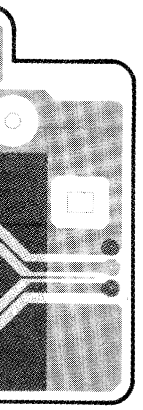
(FOIL SIDE)

SWITCH

D
C
B
A
LED.
POWE
POWE
SW1
EVQ

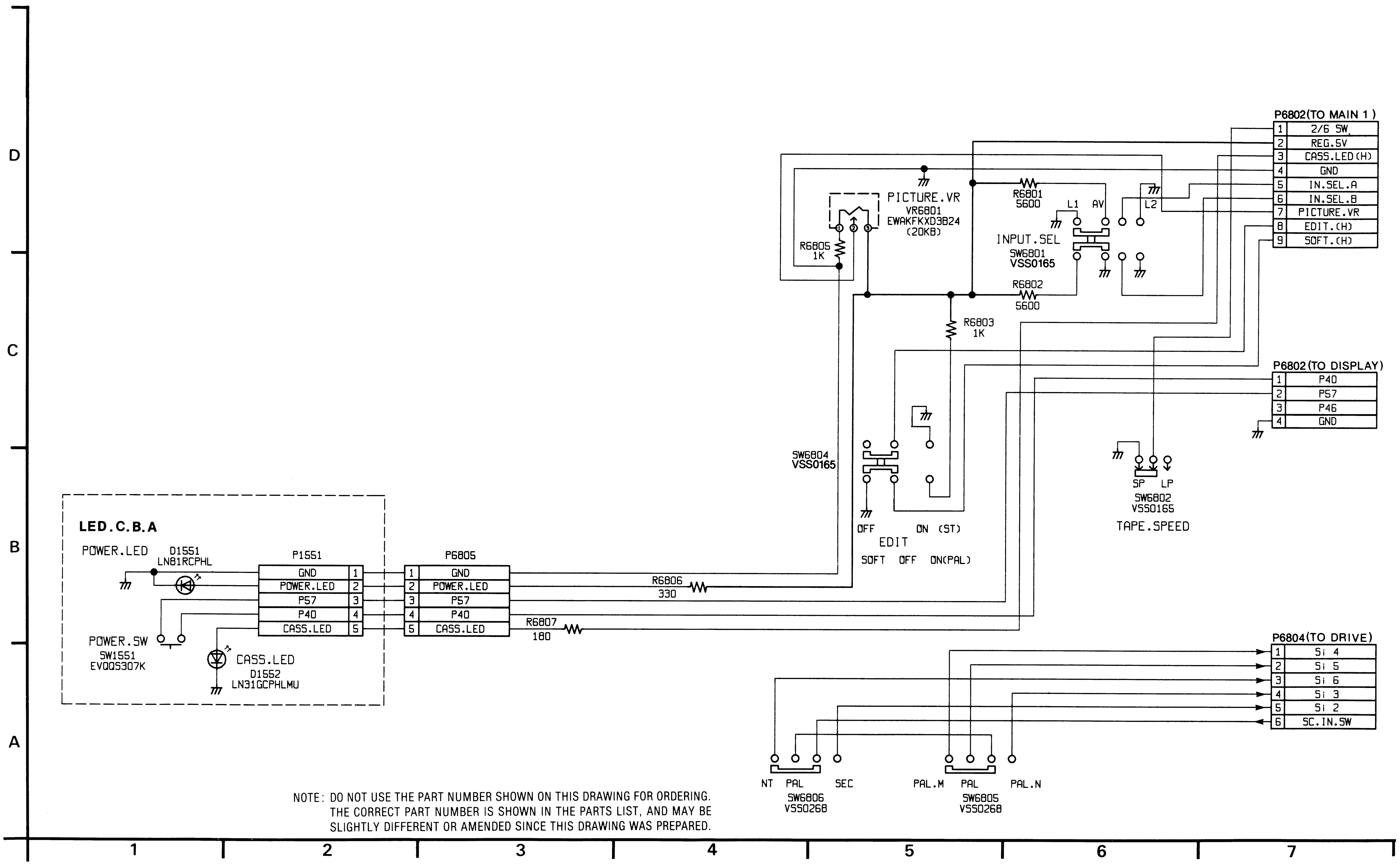
FORMATION

DE)



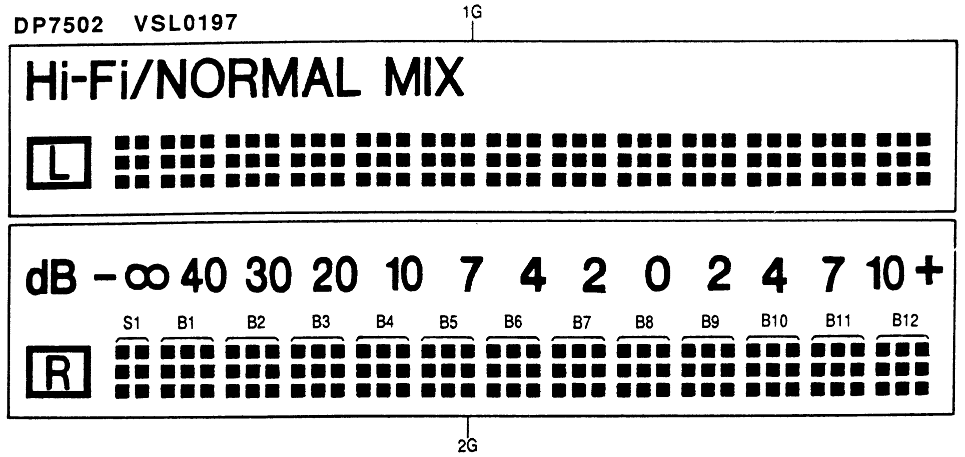
FOIL SIDE)

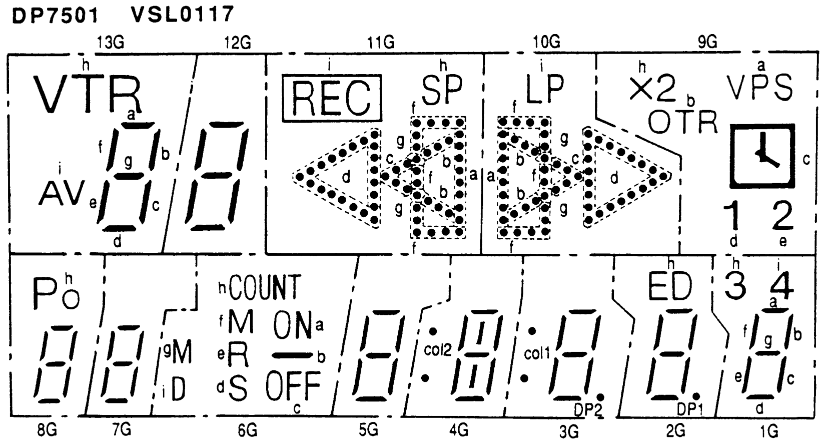
SWITCH SCHEMATIC DIAGRAM


D
C
B
A
1
2
3
4
5
6
7
P6802(TO MAIN 1)
1 2/6 SW
2 REG.5V
3 CASS.LED(H)
4 GND
5 IN.SEL.A
6 IN.SEL.B
7 PICTURE.VR
8 EDIT.(H)
9 SOFT.(H)
PICTURE.VR
VR6801
EWAKFKXD3B24
(20KB)
R6805
1K
R6801
5600
L1
AV
L2
INPUT.SEL
SW6801
VSS0165
R6802
5600
R6803
1K
P6802(TO DISPLAY)
1 P40
2 P57
3 P46
4 GND
SW6804
VSS0165
OFF
ON (ST)
EDIT
SOFT
OFF
ON(PAL)
SP
LP
SW6802
VSS0165
TAPE.SPEED
LED.C.B.A
POWER.LED
D1551
LN81RCPHL
P1551
GND 1
POWER.LED 2
P57 3
P40 4
CASS.LED 5
P6805
1 GND
2 POWER.LED
3 P57
4 P40
5 CASS.LED
R6806
330
R6807
180
POWER.SW
SW1551
EVQQS307K
CASS.LED
D1552
LN31GCPHLMU
P6804(TO DRIVE)
1 Si 4
2 Si 5
3 Si 6
4 Si 3
5 Si 2
6 SC.IN.SW
NT
PAL
SEC
SW6806
VSS0268
PAL.M
PAL
PAL.N
SW6805
VSS0268

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DISPLAY C.B.A. (VEP07613A)

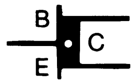

DP7502 VSL0197
1G
Hi-Fi/NORMAL MIX
L
dB -∞ 40 30 20 10 7 4 2 0 2 4 7 10 +
S1 B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12
R
2G

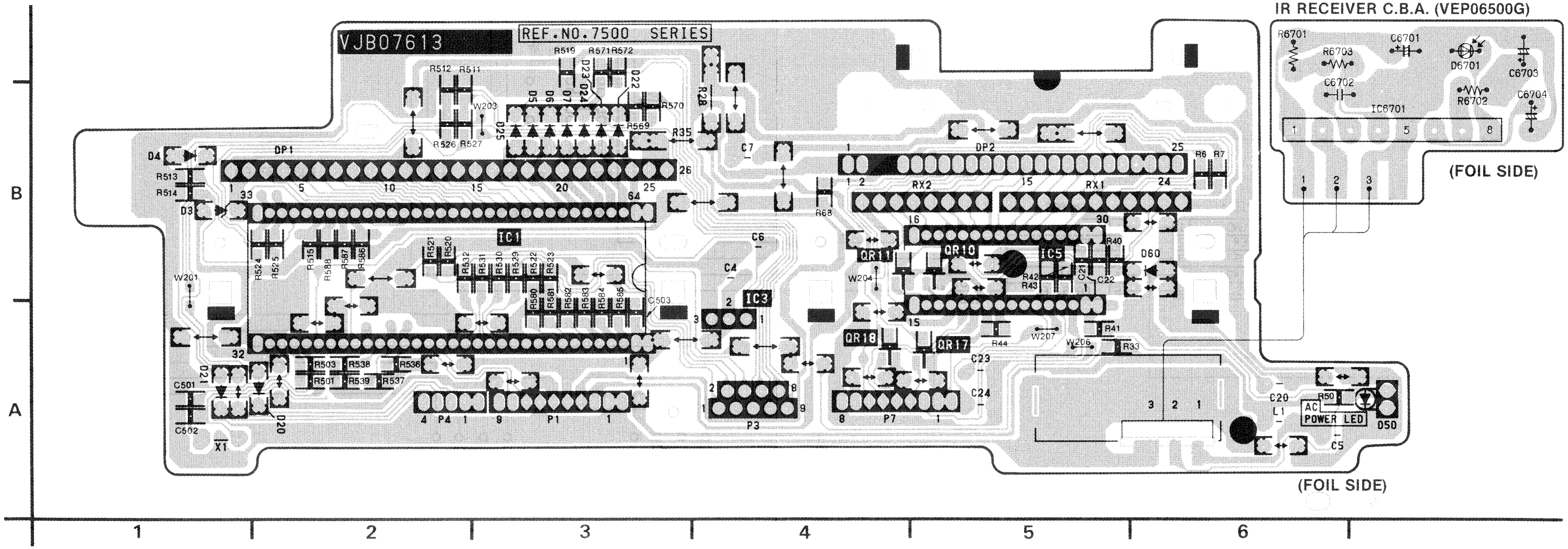

DP7501 VSL0117
13G 12G 11G 10G 9G
VTR
AV
REC
SP
LP
×2
OTR
VPS
1 2
P
COUNT
M
R
S
ON
OFF
col2
col1
ED
3 4
DP2
DP1
8G 7G 6G 5G 4G 3G 2G 1G

DISPLAY C.B.A.	
Transistor & Resistor	
QR7510	B-5
QR7511	B-4
QR7517	A-5
QR7518	A-4
Integrated Circuit	
IC7501	B-3
IC7503	A-4
IC7505	B-5
Connector	
P7501	A-3
P7503	A-4
P7504	A-2
P7507	A-4

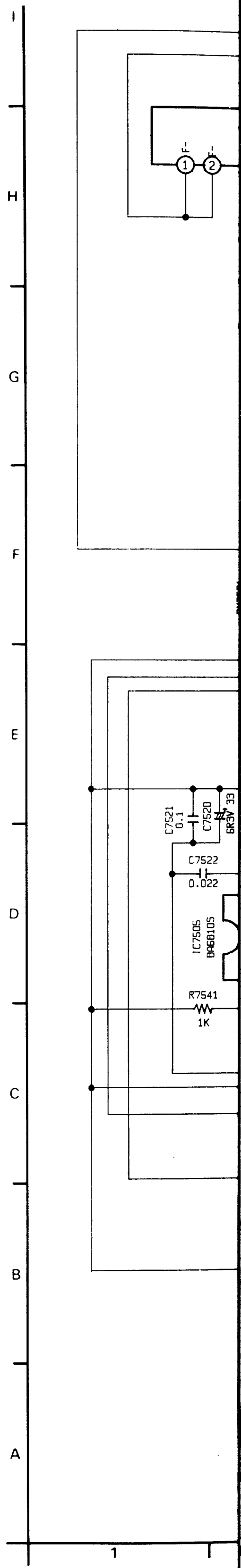
ADDRESS INFORMATION

TRANSISTOR INFORMATION



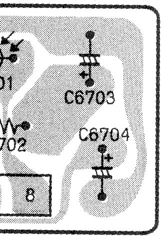

VJB07613
REF.NO.7500 SERIES
IR RECEIVER C.B.A. (VEP06500G)
R6701
R6703
C6701
C6702
D6701
C6703
R6702
C6704
IC6701
1 5 8
1 2 3
(FOIL SIDE)
DP1
DP2
RX2
RX1
IC1
IC3
IC5
QR10
QR11
QR17
QR18
D4
D3
R513
R514
W201
W203
W204
W206
W207
R512 R511
R526 R527
R519 R571 R572
D5 D6 D7 D23 D24 D22 D25
R570
R569
R35
R28
C7
C6
C4
R6 R7
R68
R40
D60
R42
R43
C21
C22
R41
R33
R44
C23
C24
C20
L1
R50
AC POWER LED
D50
C5
R524 R525 R515 R588 R587 R586 R521 R520 R532 R531 R530 R529 R522 R523 R580 R581 R582 R583 R584 R585
C503
R503 R538 R536
R501 R539 R537
C501
C502
D21
D20
X1
P4
P1
P3
P7
(FOIL SIDE)
B
A
1 2 3 4 5 6

DISPLAY S


I
H
G
F
E
D
C
B
A
C7521 0.1
C7520
C7522 0.022
IC7505 BH6105
R7541 1K
1

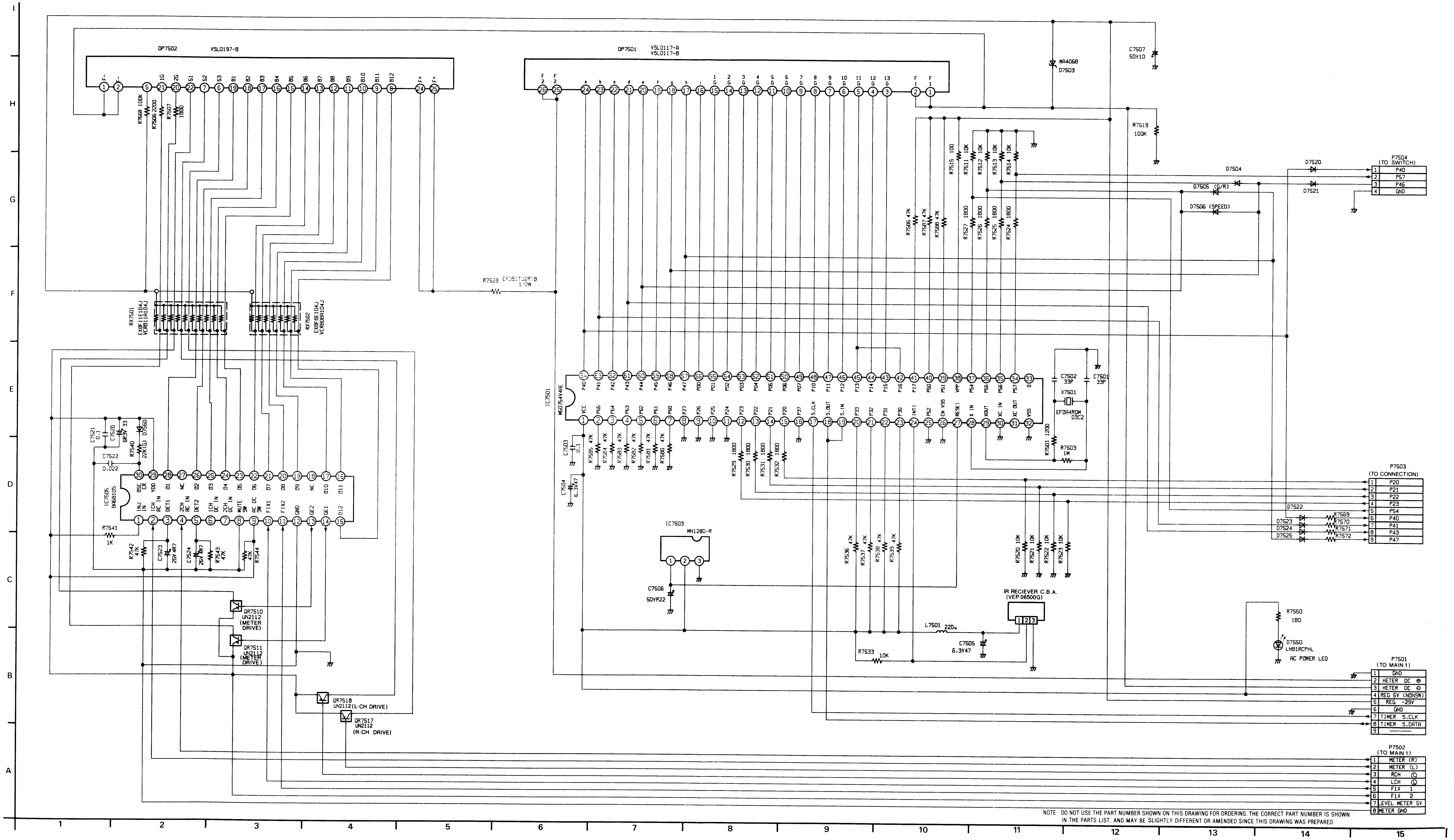
ATION

06500G)


C6703
C6704
01
702
8

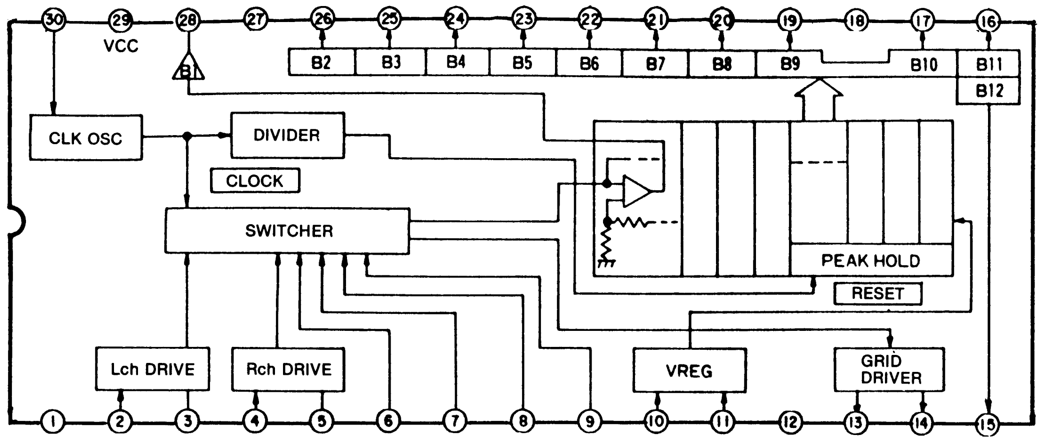
OIL SIDE)

DISPLAY SCHEMATIC DIAGRAM


DP7502 VSL0197-8
DP7501 VSL0117-A VSL0117-B
IC7501 M50754V4RE
IC7505 BA6810S
IC7503 MN1280-R
RX7501 EXBF11E104J VCR811R104J
RX7502 EXBF8E104J VCR808R104J
R7528 ERD51TJ2R7B 1/2W
MA4068 D7503
C7507 50V10
R7519 100K
D7504
D7505 (G/R)
D7506 (SPEED)
D7520
D7521
P7504 (TO SWITCH)
1 P40
2 P57
3 P46
4 GND
C7502 33P
C7501 33P
X7501 EF0A4RDM 03C2
R7501 1200
R7503 1M
C7503 0.1
C7504 6.3V47
C7506 50VP22
L7501 220u
C7505 6.3V47
R7533 10K
IR RECIEVER C.B.A. (VEP 06500G)
R7550 180
D7550 LNB1RCPHL
AC POWER LED
P7503 (TO CONNECTION)
1 P20
2 P21
3 P22
4 P23
5 P54
6 P40
7 P41
8 P43
9 P47
D7522
D7523
D7524
D7525
R7569
R7570
R7571
R7572
P7501 (TO MAIN 1)
1 GND
2 HETER DC ⊕
3 HETER DC ⊖
4 REG 5V (NONSW)
5 REG -29V
6 GND
7 TIMER S.CLK
8 TIMER S.DATA
9 ———
P7502 (TO MAIN 1)
1 METER (R)
2 METER (L)
3 RCH Ⓛ
4 LCH Ⓛ
5 F1X 1
6 F1X 2
7 LEVEL METER 5V
8 METER GND
QR7510 UN2112 (METER DRIVE)
QR7511 UN2112 (METER DRIVE)
QR7518 UN2112 (L-CH DRIVE)
QR7517 UN2112 (R-CH DRIVE)
C7521 0.1
C7520
C7522 0.022
D7560
R7540 22K(G)
R7541 1K
R7542 47K
C7523 25V4R7
C7524 25V4R7
R7543 47K
R7544 47K
R7568 100K
R7506 2200
R7507 1800
R7515 100
R7511 10K
R7512 10K
R7513 10K
R7514 10K
R7586 47K
R7587 47K
R7588 47K
R7527 1800
R7526 1800
R7525 1800
R7524 1800
R7585 47K
R7584 47K
R7583 47K
R7582 47K
R7581 47K
R7580 47K
R7529 1800
R7530 1800
R7531 1800
R7532 1800
R7536 47K
R7537 47K
R7538 47K
R7539 47K
R7520 10K
R7521 10K
R7522 10K
R7523 10K
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

IC7505 BA6810S



30
29
VCC
28
27
26
25
24
23
22
21
20
19
18
17
16
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
CLK OSC
DIVIDER
CLOCK
SWITCHER
PEAK HOLD
RESET
Lch DRIVE
Rch DRIVE
VREG
GRID DRIVER
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

DISPLAY C.B.A. TRANSISTORs VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR7510			QR7511			QR7517			QR7518								
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B						
NTSC		PAL	REC		5.1	25.3	4.6	5.1	−25.3	4.2	5.1	5.1	0	5.1	5.1	0						
	PAL	NTSC	PLAY		5.0	−25.3	4.6	5.0	0	4.8	5.0	5.0	0	5.0	5.0	0						
PAL		SECAM	REC		5.1	−25.3	4.6	5.1	−25.7	4.6	5.1	5.1	0	5.1	5.1	0						
	SECAM	PAL	PLAY		5.1	−25.3	4.6	5.1	−25.4	4.6	5.1	5.0	0	5.1	5.0	0						

DISPLAY C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC7501																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		5.1	0	0	0	0	0	8.0	0	0	0	0	0	0	0	0	0	4.6	4.0	4.1	5.0
	PAL	NTSC	PLAY		5.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.6	4.4	4.3	5.0
PAL		SECAM	REC		5.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.7	4.8	4.8	5.0
	SECAM	PAL	PLAY		5.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.7	4.7	4.7	5.0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC7501																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	REC		5.1	5.1	5.1	5.1	0	0	5.1	—	—	0	5.1	0	0	0	0.5	1.8	0	−28.3	−28.3	−28.3
	PAL	NTSC	PLAY		5.0	5.0	5.0	5.0	0	0	5.1	—	—	0	5.0	0	0	0	0.6	1.3	0	0	−28.3	−28.2
PAL		SECAM	REC		5.0	5.0	5.0	5.1	0	0	5.1	—	—	0	0	0	0	0	0.5	1.8	0	−28.3	−28.3	−28.3
	SECAM	PAL	PLAY		5.0	5.0	5.0	5.1	0	0	5.1	—	—	0	5.1	0	0	0	0.8	1.4	0	−28.3	−28.3	−28.3

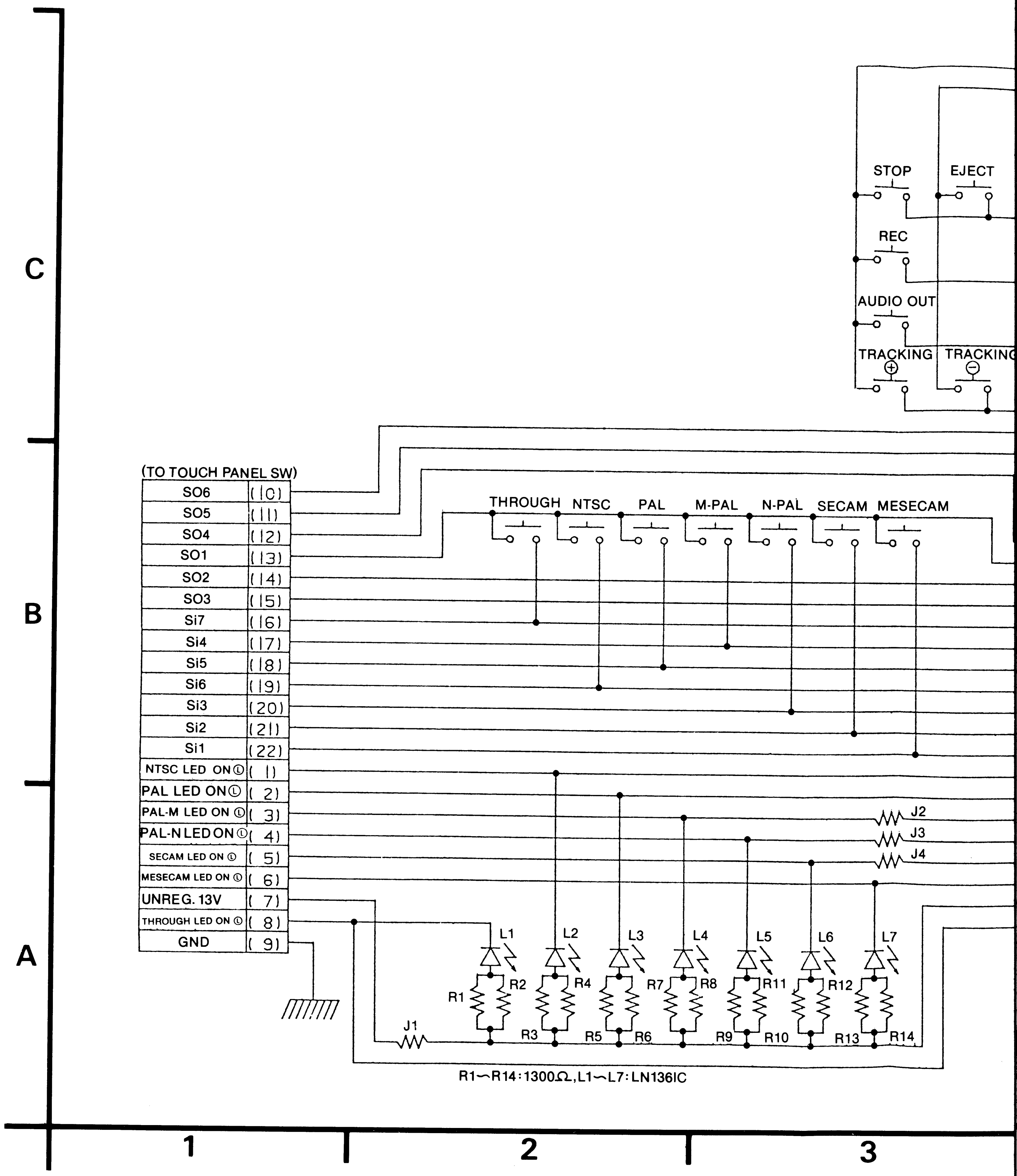
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC7501																			
				PIN NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
NTSC		PAL	REC		−28.3	−26.3	−26.3	−26.1	−26.4	−25.3	−26.2	−26.2	−26.2	−26.0	−26.2	−26.2	−26.2	−26.2	−26.2	−24.3	−21.7	−21.8	−21.8	−24.0
	PAL	NTSC	PLAY		−28.2	−26.2	−26.1	−26.1	−26.2	−26.1	−26.1	−26.1	−26.1	−26.1	−26.1	−26.1	−26.1	−26.1	−26.1	−26.0	−21.5	−21.6	−19.8	−23.8
PAL		SECAM	REC		−28.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.5	−26.3	−26.8	−26.4	−26.2	−24.2	−21.6	−23.8	−21.9	−21.9
	SECAM	PAL	PLAY		−28.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.3	−26.5	−26.2	−26.2	−26.2	−26.2	−26.1	−21.6	−19.8	−21.7	−21.4

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC7501										IC7503									
				PIN NO.	61	62	63	64							1	2	3							
NTSC		PAL	REC		−24.0	−17.8	−15.8	−21.8							5.1	5.1	0							
	PAL	NTSC	PLAY		−21.7	−15.8	−17.4	−17.0							5.1	5.1	0							
PAL		SECAM	REC		−21.9	−15.9	−17.8	−17.8							5.1	5.1	0							
	SECAM	PAL	PLAY		−20.9	−17.8	−15.9	−15.7							5.1	5.1	0							

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC7505																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	REC		0.8	1.9	0.7	1.9	0.7	0	0	0	5.1	2.3	1.3	0	4.6	4.6	−28.2	−28.2	−28.2	0	−28.2	−28.2
	PAL	NTSC	PLAY		0.8	1.9	0.7	1.9	0.7	0	0	0.1	5.0	2.3	1.3	0	4.6	4.5	−28.1	−28.1	−28.1	0	−28.1	−28.1
PAL		SECAM	REC		0.8	1.9	0.7	1.9	0	0	0	0	5.1	2.3	1.3	0	4.2	4.6	−28.1	−28.1	−28.1	0	−28.1	−28.1
	SECAM	PAL	PLAY		0.8	1.8	0.7	1.9	0.7	0	0	0	5.1	2.3	1.3	0	4.6	4.6	−28.1	−28.1	−28.1	0	−28.1	−28.1

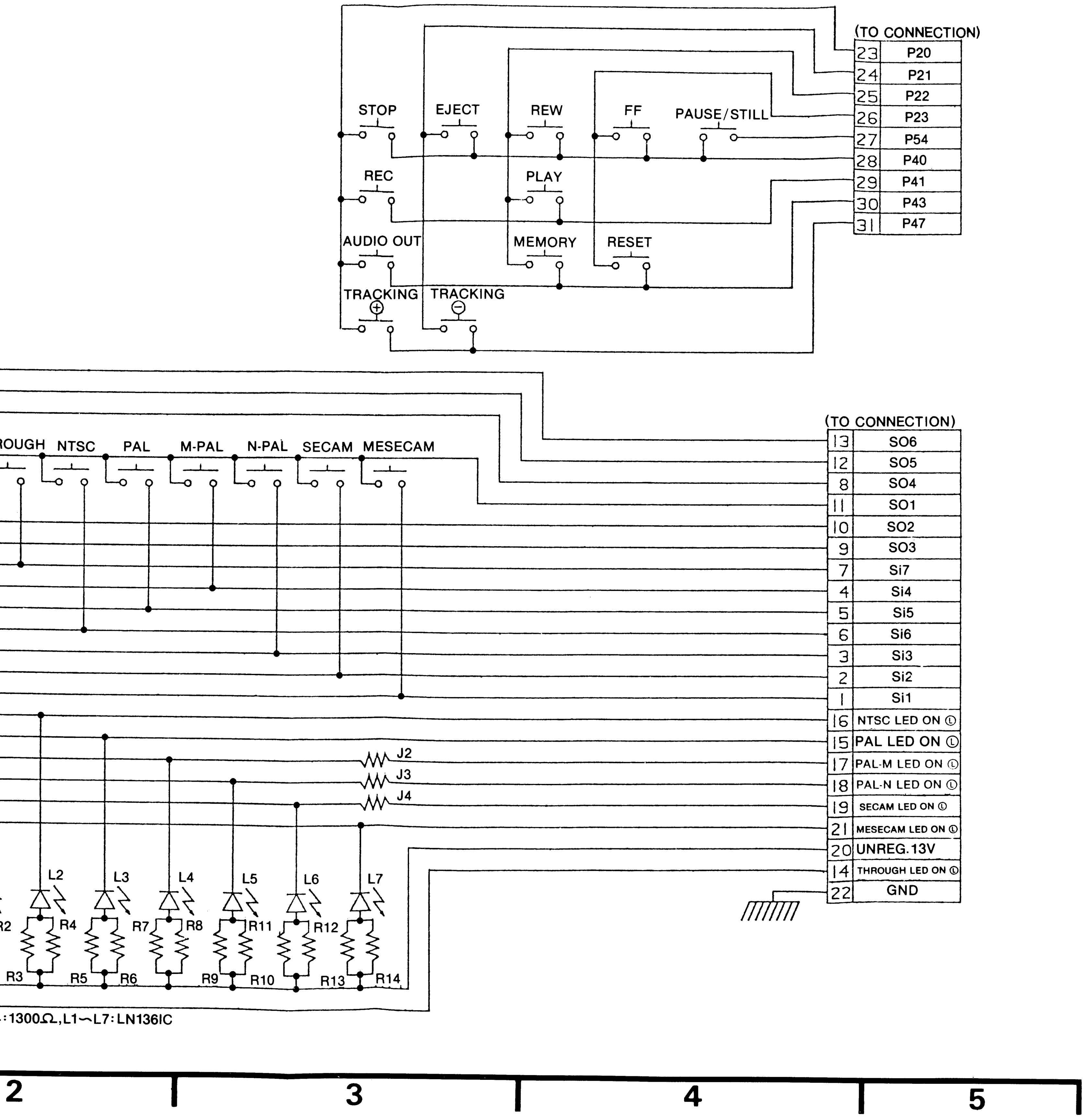
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC7505																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30										
NTSC		PAL	REC		−28.2	−28.2	−28.2	−28.2	−19.8	−19.7	0	−19.6	5.1	3.2										
	PAL	NTSC	PLAY		−28.1	−28.1	−28.1	−28.1	−19.6	−19.7	0	−19.6	5.0	3.1										
PAL		SECAM	REC		−28.2	−28.2	−28.1	−28.1	−19.5	−19.6	0	−19.5	5.1	3.1										
	SECAM	PAL	PLAY		−28.1	−28.1	−28.1	−28.1	−19.5	−20.1	0	−19.3	5.1	3.1										

KEY BOARD SW UNIT (VES0581) SCHEMATIC DIAGRAM

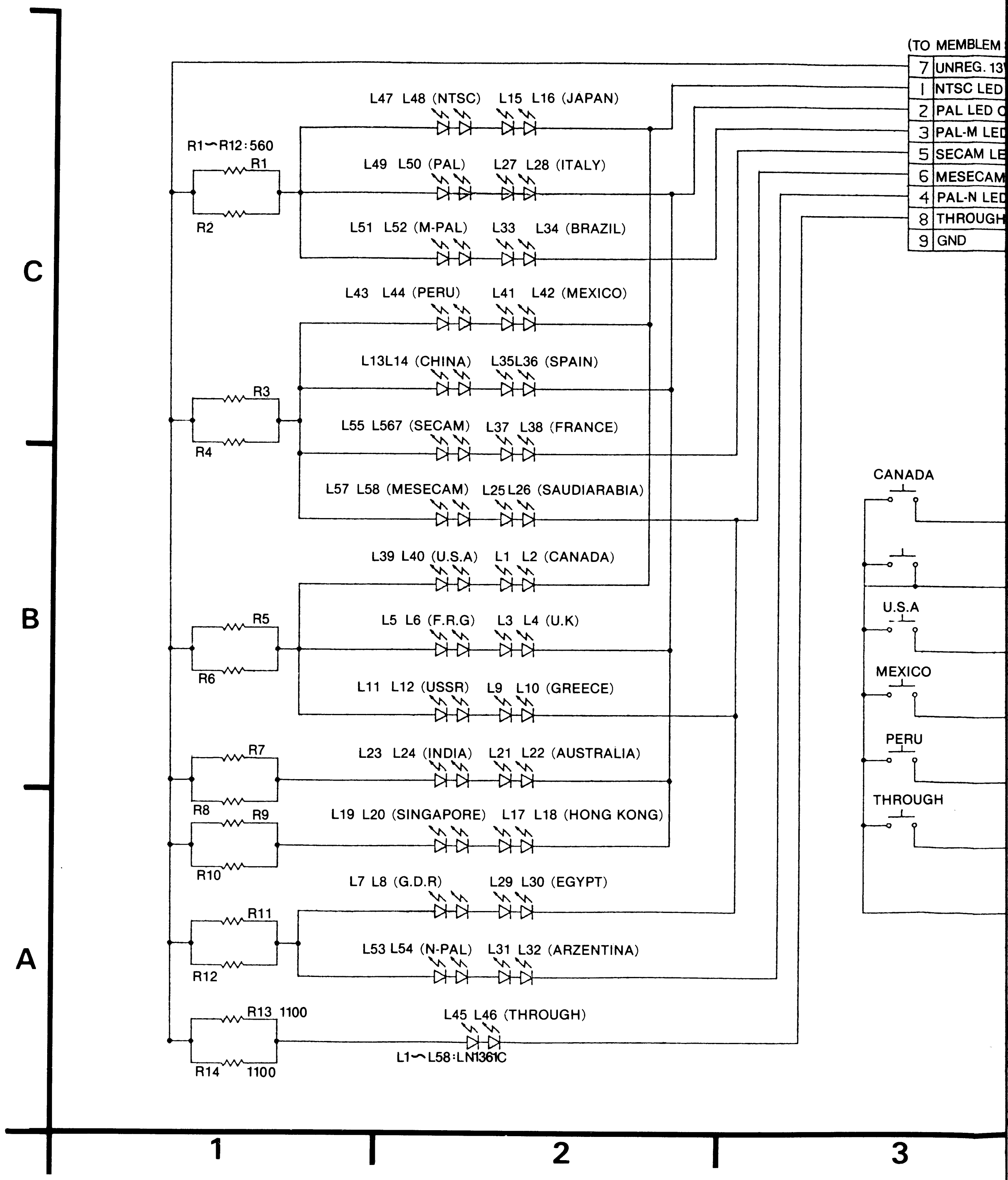


C
B
A
1
2
3
STOP
EJECT
REC
AUDIO OUT
TRACKING ⊕
TRACKING ⊖
(TO TOUCH PANEL SW)
SO6 (10)
SO5 (11)
SO4 (12)
SO1 (13)
SO2 (14)
SO3 (15)
Si7 (16)
Si4 (17)
Si5 (18)
Si6 (19)
Si3 (20)
Si2 (21)
Si1 (22)
NTSC LED ON Ⓛ (1)
PAL LED ON Ⓛ (2)
PAL-M LED ON Ⓛ (3)
PAL-N LED ON Ⓛ (4)
SECAM LED ON Ⓛ (5)
MESECAM LED ON Ⓛ (6)
UNREG. 13V (7)
THROUGH LED ON Ⓛ (8)
GND (9)
THROUGH
NTSC
PAL
M-PAL
N-PAL
SECAM
MESECAM
J1
J2
J3
J4
L1
L2
L3
L4
L5
L6
L7
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R1∼R14 : 1300Ω, L1∼L7 : LN136IC

HEMATIC DIAGRAM


(TO CONNECTION)
23 P20
24 P21
25 P22
26 P23
27 P54
28 P40
29 P41
30 P43
31 P47
STOP
EJECT
REW
FF
PAUSE/STILL
REC
PLAY
AUDIO OUT
MEMORY
RESET
TRACKING ⊕
TRACKING ⊖
(TO CONNECTION)
13 SO6
12 SO5
8 SO4
11 SO1
10 SO2
9 SO3
7 Si7
4 Si4
5 Si5
6 Si6
3 Si3
2 Si2
1 Si1
16 NTSC LED ON Ⓛ
15 PAL LED ON Ⓛ
17 PAL-M LED ON Ⓛ
18 PAL-N LED ON Ⓛ
19 SECAM LED ON Ⓛ
21 MESECAM LED ON Ⓛ
20 UNREG.13V
14 THROUGH LED ON Ⓛ
22 GND
ROUGH
NTSC
PAL
M-PAL
N-PAL
SECAM
MESECAM
J2
J3
J4
L2
L3
L4
L5
L6
L7
R2
R4
R7
R8
R11
R12
R3
R5
R6
R9
R10
R13
R14
:1300Ω, L1～L7: LN136IC
2
3
4
5

TOUCH PANEL SW UNIT (VES0582) SCHEMATIC DIAGRAM


(TO MEMBLEM
7 UNREG. 13
1 NTSC LED
2 PAL LED
3 PAL-M LED
5 SECAM LE
6 MESECAM
4 PAL-N LED
8 THROUGH
9 GND
R1～R12: 560
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13 1100
R14 1100
L47 L48 (NTSC)
L15 L16 (JAPAN)
L49 L50 (PAL)
L27 L28 (ITALY)
L51 L52 (M-PAL)
L33 L34 (BRAZIL)
L43 L44 (PERU)
L41 L42 (MEXICO)
L13L14 (CHINA)
L35L36 (SPAIN)
L55 L567 (SECAM)
L37 L38 (FRANCE)
L57 L58 (MESECAM)
L25L26 (SAUDIARABIA)
L39 L40 (U.S.A)
L1 L2 (CANADA)
L5 L6 (F.R.G)
L3 L4 (U.K)
L11 L12 (USSR)
L9 L10 (GREECE)
L23 L24 (INDIA)
L21 L22 (AUSTRALIA)
L19 L20 (SINGAPORE)
L17 L18 (HONG KONG)
L7 L8 (G.D.R)
L29 L30 (EGYPT)
L53 L54 (N-PAL)
L31 L32 (ARZENTINA)
L45 L46 (THROUGH)
L1～L58: LN1361C
CANADA
U.S.A
MEXICO
PERU
THROUGH
C
B
A
1
2
3

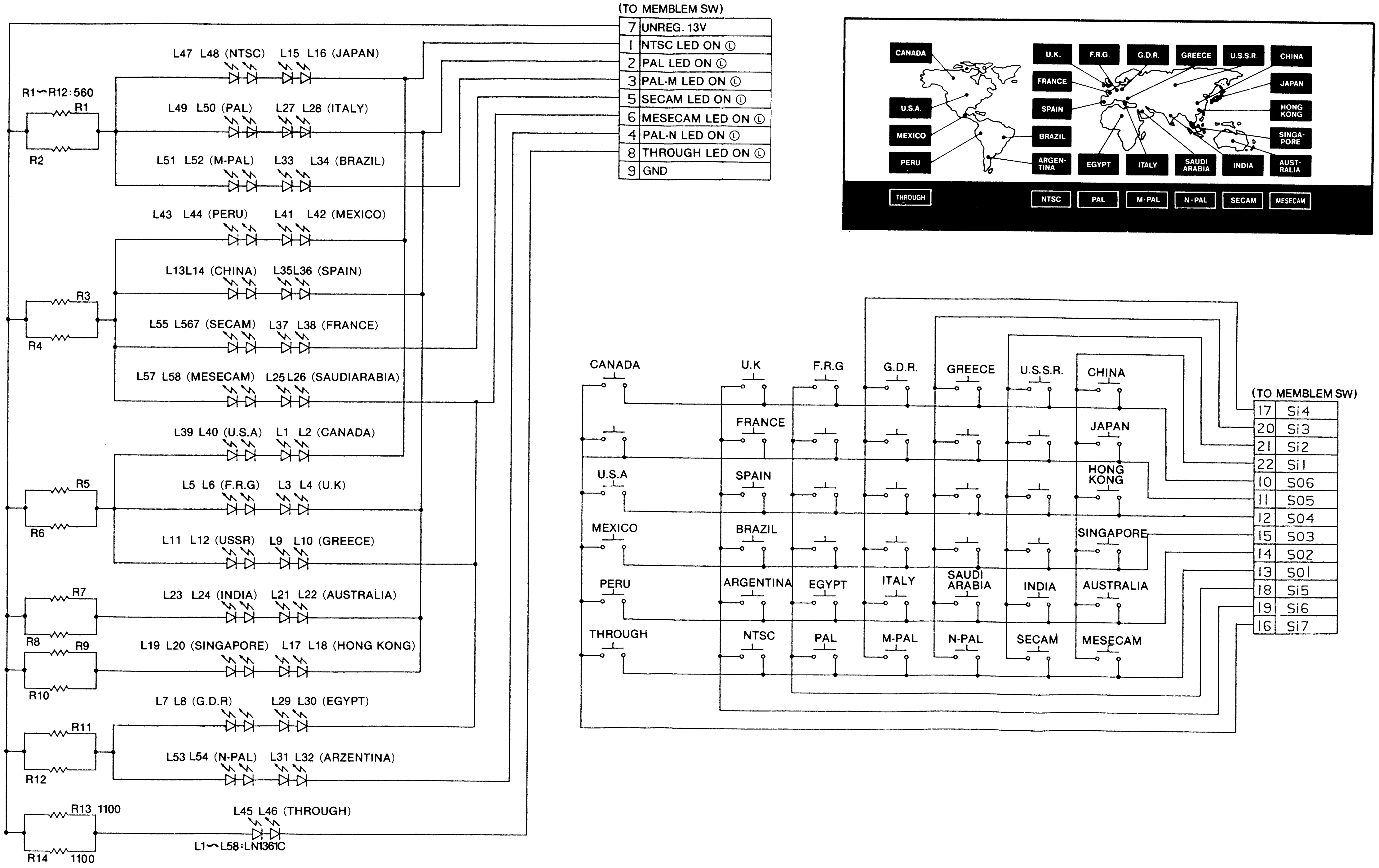
TOUCH PANEL SW UNIT (VES0582) SCHEMATIC DIAGRAM

(TO CONNECTION)

23	P20
24	P21
25	P22
26	P23
27	P54
28	P40
29	P41
30	P43
31	P47

CONNECTION)

SO6
SO5
SO4
SO1
SO2
SO3
Si7
Si4
Si5
Si6
Si3
Si2
Si1
NTSC LED ON Ⓛ
PAL LED ON Ⓛ
PAL-M LED ON Ⓛ
PAL-N LED ON Ⓛ
SECAM LED ON Ⓛ
MESECAM LED ON Ⓛ
UNREG. 13V
THROUGH LED ON Ⓛ
GND


R1～R12 : 560
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13 1100
R14 1100
L47 L48 (NTSC) L15 L16 (JAPAN)
L49 L50 (PAL) L27 L28 (ITALY)
L51 L52 (M-PAL) L33 L34 (BRAZIL)
L43 L44 (PERU) L41 L42 (MEXICO)
L13L14 (CHINA) L35L36 (SPAIN)
L55 L567 (SECAM) L37 L38 (FRANCE)
L57 L58 (MESECAM) L25L26 (SAUDIARABIA)
L39 L40 (U.S.A) L1 L2 (CANADA)
L5 L6 (F.R.G) L3 L4 (U.K)
L11 L12 (USSR) L9 L10 (GREECE)
L23 L24 (INDIA) L21 L22 (AUSTRALIA)
L19 L20 (SINGAPORE) L17 L18 (HONG KONG)
L7 L8 (G.D.R) L29 L30 (EGYPT)
L53 L54 (N-PAL) L31 L32 (ARZENTINA)
L45 L46 (THROUGH)
L1～L58 : LN1361C
(TO MEMBLEM SW)
7 UNREG. 13V
1 NTSC LED ON Ⓛ
2 PAL LED ON Ⓛ
3 PAL-M LED ON Ⓛ
5 SECAM LED ON Ⓛ
6 MESECAM LED ON Ⓛ
4 PAL-N LED ON Ⓛ
8 THROUGH LED ON Ⓛ
9 GND
CANADA
U.K.
F.R.G.
G.D.R.
GREECE
U.S.S.R.
CHINA
FRANCE
JAPAN
U.S.A.
SPAIN
HONG KONG
MEXICO
BRAZIL
SINGA-PORE
PERU
ARGEN-TINA
EGYPT
ITALY
SAUDI ARABIA
INDIA
AUST-RALIA
THROUGH
NTSC
PAL
M-PAL
N-PAL
SECAM
MESECAM
CANADA
U.K
F.R.G
G.D.R.
GREECE
U.S.S.R.
CHINA
FRANCE
JAPAN
U.S.A
SPAIN
HONG KONG
MEXICO
BRAZIL
SINGAPORE
PERU
ARGENTINA
EGYPT
ITALY
SAUDI ARABIA
INDIA
AUSTRALIA
THROUGH
NTSC
PAL
M-PAL
N-PAL
SECAM
MESECAM
(TO MEMBLEM SW)
17 Si4
20 Si3
21 Si2
22 Si1
10 SO6
11 SO5
12 SO4
15 SO3
14 SO2
13 SO1
18 Si5
19 Si6
16 Si7

C

B

A

5

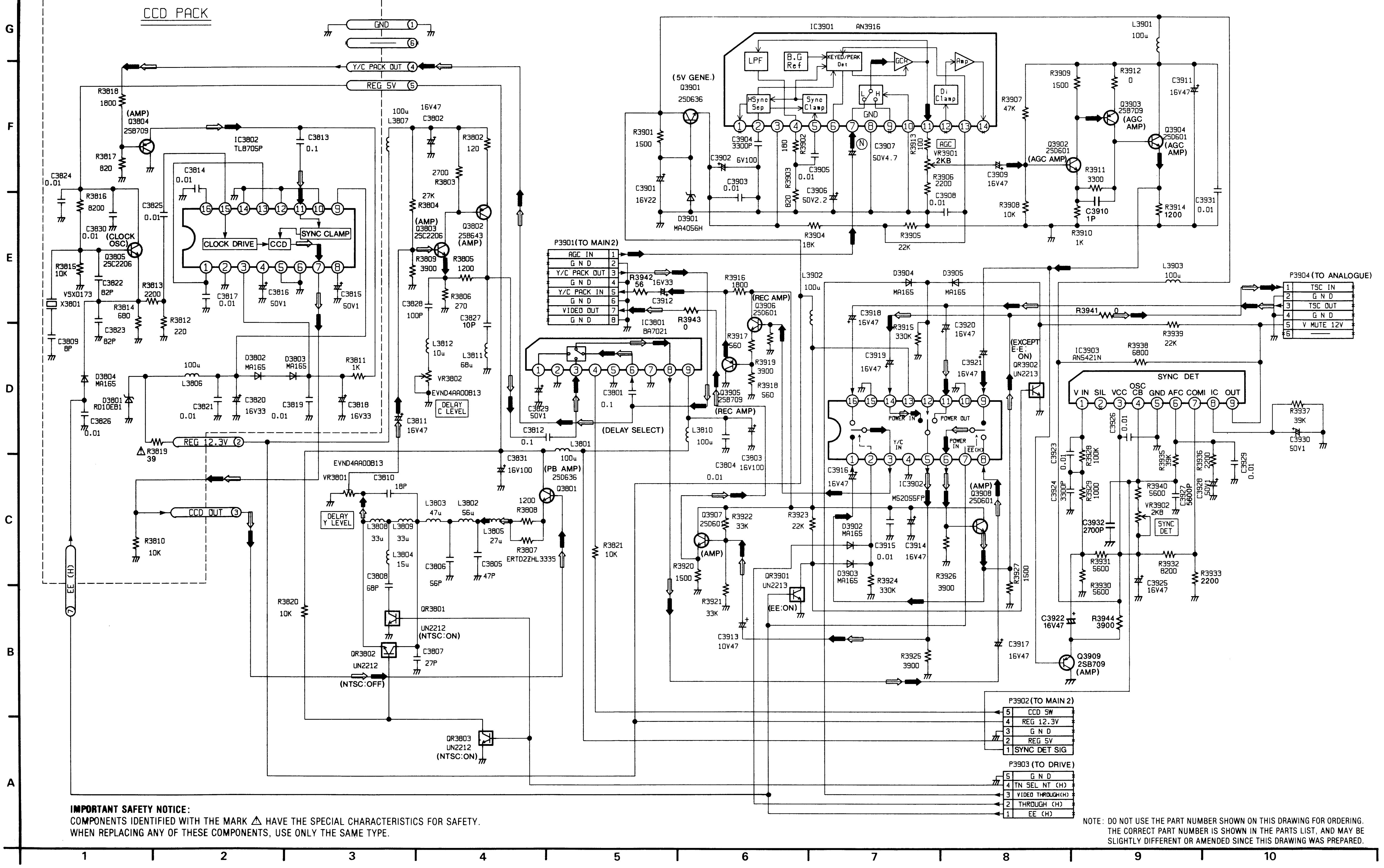
1 2 3 4 5 6

0.32H & CCD PACK SCHEMATIC DIAGRAM

SERV

⬅ VIDEO MAIN SIGNAL PATH IN REC MODE

⇦ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE


CCD PACK
GND ①
⑥
Y/C PACK OUT ④
REG 5V ⑤
REG 12.3V ②
CCD OUT ③
EE (H) ⑦
IC3802 TL8705P
CLOCK DRIVE
CCD
SYNC CLAMP
Q3804 2SB709 (AMP)
Q3805 2SC2206 (CLOCK OSC)
X3801 VSX0173
D3801 RD10EB1
D3802 MA165
D3803 MA165
D3804 MA165
Q3803 2SC2206 (AMP)
Q3802 2SB643 (AMP)
Q3801 2SD636 (PB AMP)
VR3801 EVND4AA00B13 DELAY Y LEVEL
VR3802 EVND4AA00B13 DELAY C LEVEL
QR3801 UN2212 (NTSC:ON)
QR3802 UN2212 (NTSC:OFF)
QR3803 UN2212 (NTSC:ON)
(DELAY SELECT)
ERTD2ZHL3335
P3901 (TO MAIN 2)
AGC IN
GND
Y/C PACK OUT
GND
Y/C PACK IN
GND
VIDEO OUT
GND
IC3801 BA7021
IC3901 AN3916
LPF
B.G Ref
KEYED/PEAK Det
GCA
Amp
HSync Sep
Sync Clamp
GND
Di Clamp
AGC VR3901 2KB
Q3901 2SD636 (5V GENE.)
D3901 MA4056H
Q3902 2SD601 (AGC AMP)
Q3903 2SB709 (AGC AMP)
Q3904 2SD601 (AGC AMP)
L3901 100u
IC3902 M52055FP
POWER IN
POWER OUT
Y/C IN
EE(H)
Q3905 2SB709 (REC AMP)
Q3906 2SD601 (REC AMP)
Q3907 2SD601 (AMP)
Q3908 2SD601 (AMP)
QR3901 UN2213 (EE:ON)
QR3902 UN2213 (EXCEPT E-E: ON)
D3902 MA165
D3903 MA165
D3904 MA165
D3905 MA165
IC3903 AN5421N
SYNC DET
V IN SIL VCC OSC CB GND AFC COMI IC OUT
VR3902 2KB SYNC DET
Q3909 2SB709 (AMP)
P3904 (TO ANALOGUE)
TSC IN
GND
TSC OUT
GND
V MUTE 12V
P3902 (TO MAIN 2)
CCD SW
REG 12.3V
GND
REG 5V
SYNC DET SIG
P3903 (TO DRIVE)
GND
TN SEL NT (H)
VIDEO THROUGH (H)
THROUGH (H)
EE (H)
R3819 39
G F E D C B A
1 2 3 4 5 6 7 8 9 10

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
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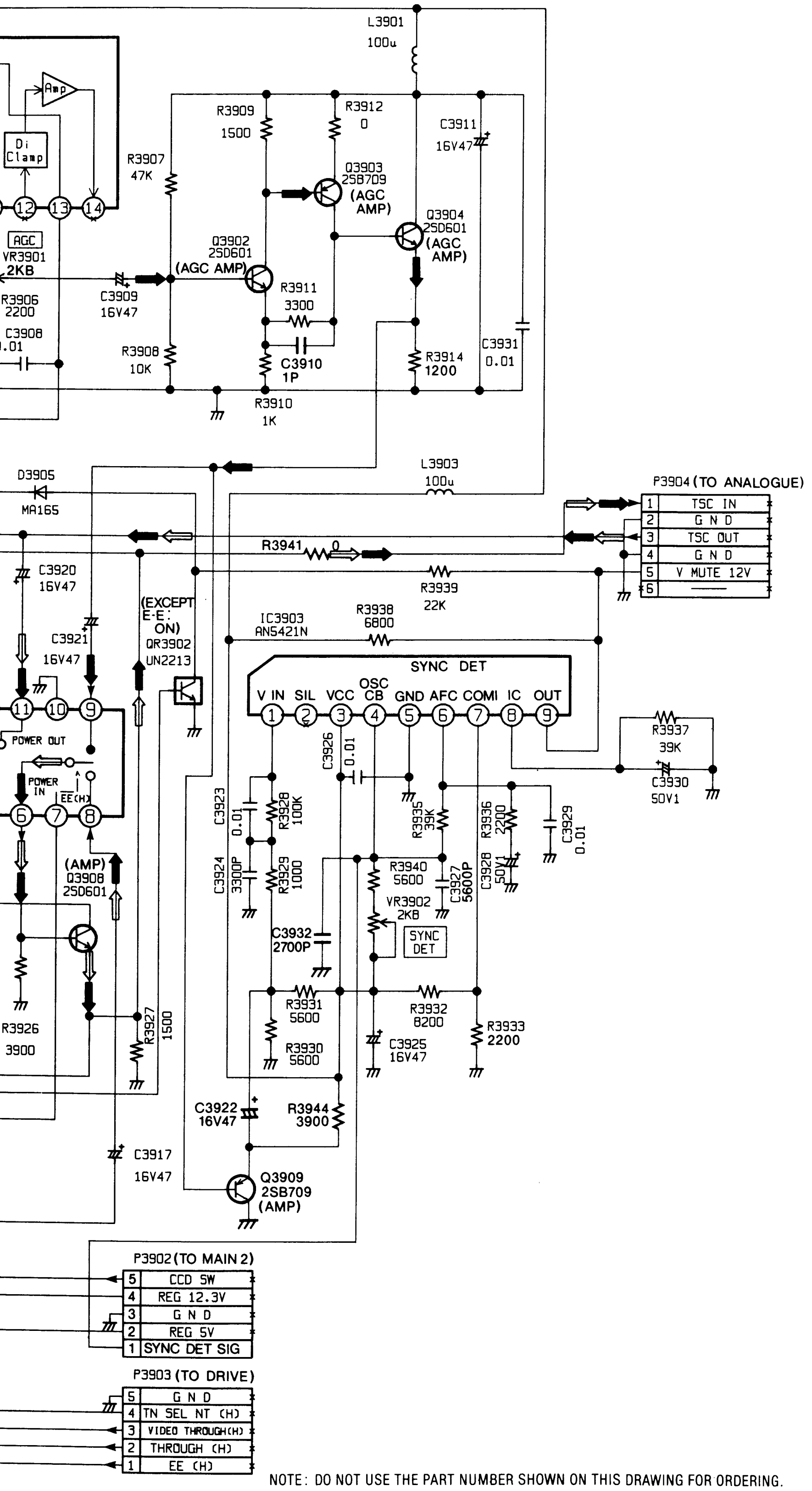
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

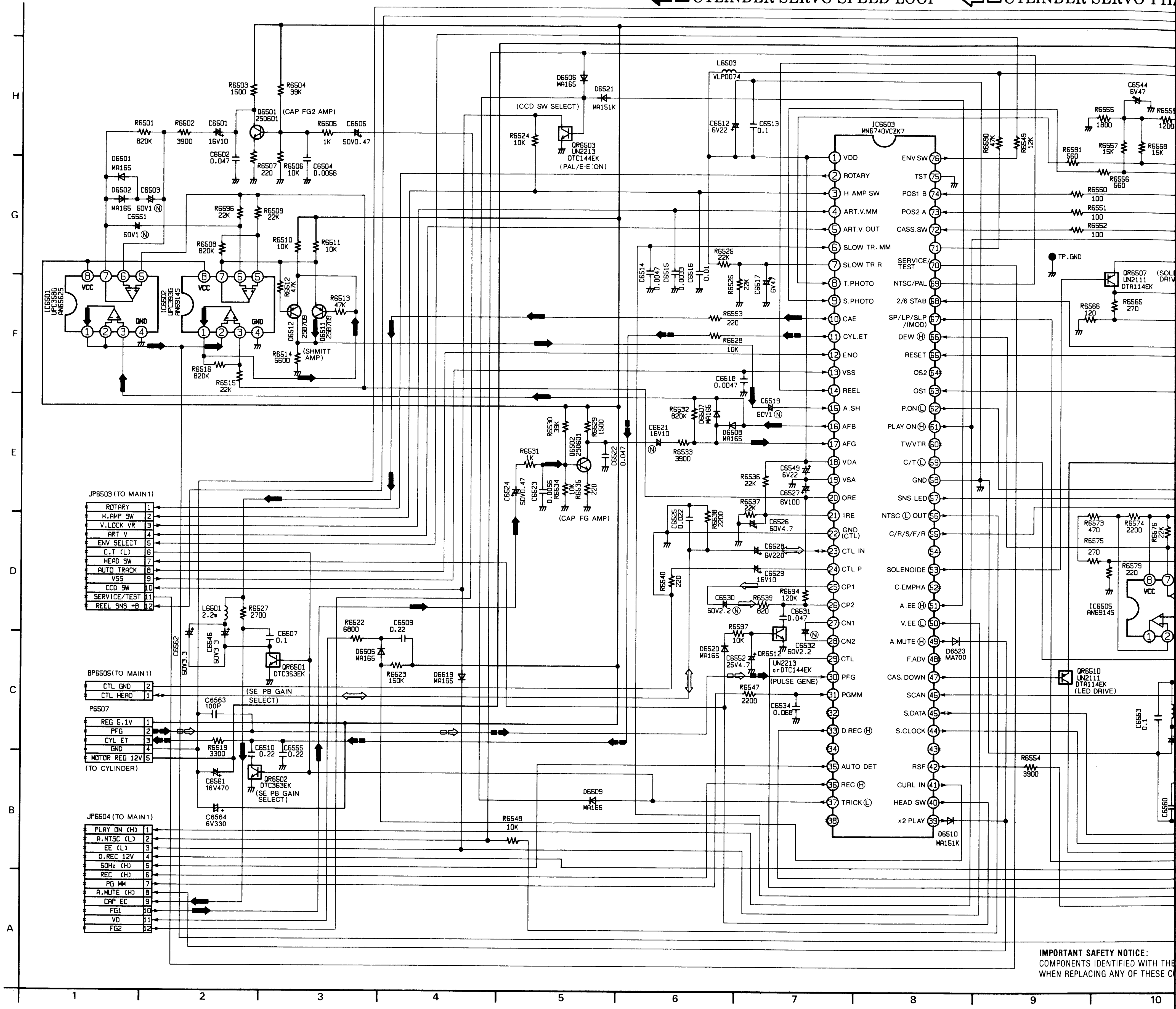
SERVO & SYSTEM CONTROL SCHEMATIC DIAGRAM

⬅ CAPSTAN SERVO SPEED LOOP
⬅ CYLINDER SERVO SPEED LOOP
⇦ CAPSTAN SERVO PHA
⇦ CYLINDER SERVO PH



L3901 100u
R3909 1500
R3912 0
R3907 47K
Q3903 2SB709 (AGC AMP)
Q3904 2SD601 (AGC AMP)
C3911 16V47
Q3902 2SD601 (AGC AMP)
Di Clamp
AGC
VR3901 2KB
R3906 2200
C3909 16V47
R3911 3300
R3908 10K
C3910 1P
R3910 1K
R3914 1200
C3931 0.01
D3905 MA165
L3903 100u
P3904 (TO ANALOGUE)
1 TSC IN
2 GND
3 TSC OUT
4 GND
5 V MUTE 12V
6 ———
C3920 16V47
R3941 0
R3939 22K
C3921 16V47
(EXCEPT E-E: ON) QR3902 UN2213
IC3903 AN5421N
R3938 6800
SYNC DET
V IN SIL VCC OSC CB GND AFC COMI IC OUT
R3937 39K
C3930 50V1
POWER OUT
POWER IN
EE(H)
(AMP) Q3908 2SD601
C3923 0.01
C3926 0.01
R3928 100K
R3935 39K
R3936 2200
C3929 0.01
C3924 3300P
R3929 1000
R3940 5600
C3927 5600P
C3928 50V1
VR3902 2KB
SYNC DET
C3932 2700P
R3931 5600
R3932 8200
R3933 2200
R3930 5600
C3925 16V47
R3926 3900
R3927 1500
C3922 16V47
R3944 3900
C3917 16V47
Q3909 2SB709 (AMP)
P3902 (TO MAIN 2)
5 CCD SW
4 REG 12.3V
3 GND
2 REG 5V
1 SYNC DET SIG
P3903 (TO DRIVE)
5 GND
4 TN SEL NT (H)
3 VIDEO THROUGH(H)
2 THROUGH (H)
1 EE (H)

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

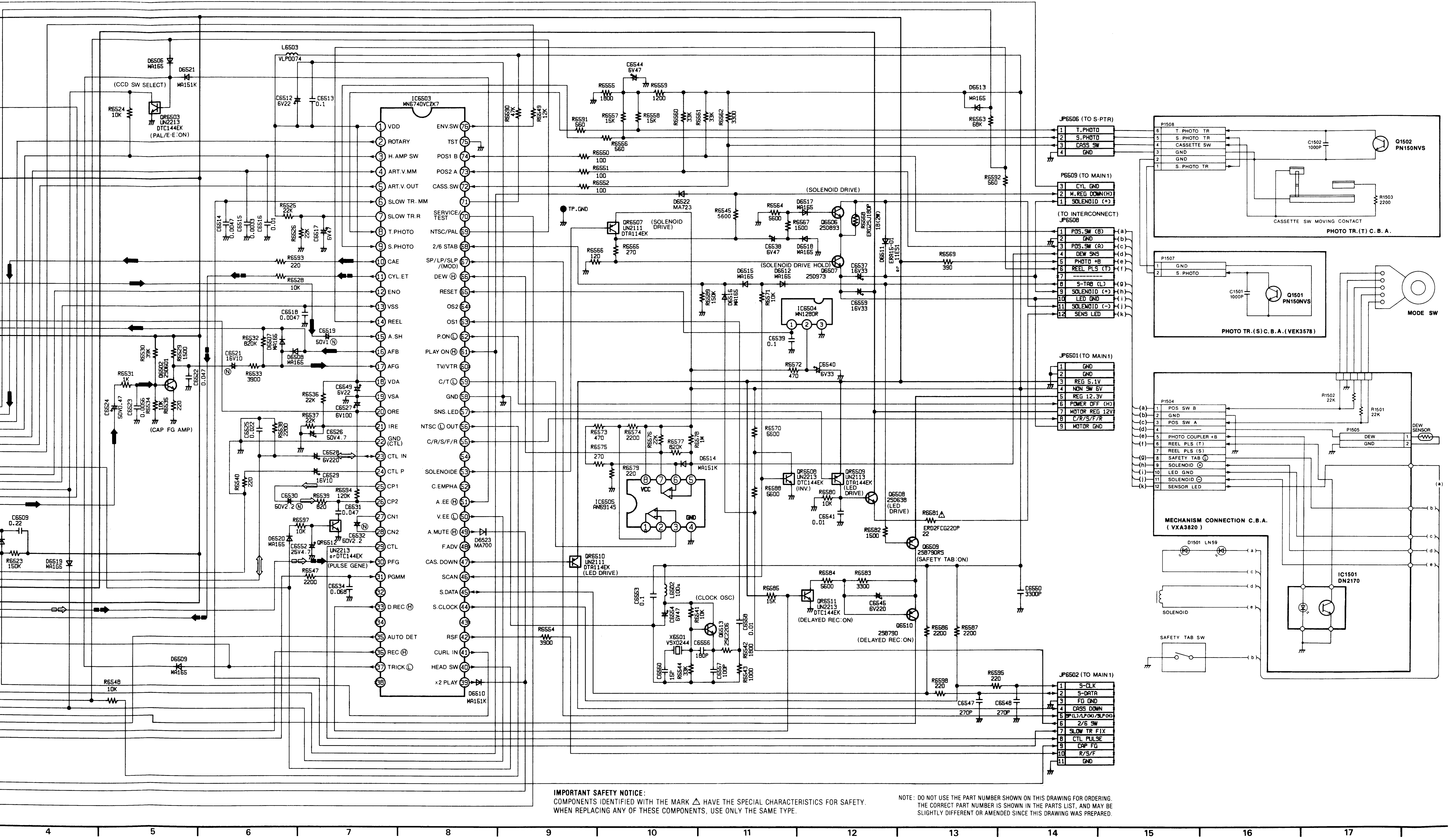


H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
R6503 1500
R6504 39K
Q6501 2SD601 (CAP FG2 AMP)
R6501 820K
R6502 3900
C6501 16V10
R6505 1K
C6505 50V0.47
C6502 0.047
R6507 220
R6506 10K
C6504 0.0056
D6501 MA165
D6502 MA165
C6503 50V1
C6551 50V1
R6596 22K
R6509 22K
R6508 820K
R6510 10K
R6511 10K
R6512 47K
R6513 47K
IC6501 UPC1356 AN6562S
IC6502 UPC1356 AN6914S
VCC
GND
Q6512 2SB709
Q6511 2SB709
R6514 5600
(SHMITT AMP)
R6516 820K
R6515 22K
D6506 MA165
D6521 MA151K
(CCD SW SELECT)
R6524 10K
QR6503 UN2213 DTC144EK (PAL/E·E:ON)
L6503 VLP0074
C6512 6V22
C6513 0.1
IC6503 MN6740VCZK7
1 VDD
2 ROTARY
3 H.AMP SW
4 ART.V.MM
5 ART.V. OUT
6 SLOW TR. MM
7 SLOW TR.R
8 T.PHOTO
9 S.PHOTO
10 CAE
11 CYL.ET
12 ENO
13 VSS
14 REEL
15 A.SH
16 AFB
17 AFG
18 VDA
19 VSA
20 ORE
21 IRE
22 GND (CTL)
23 CTL IN
24 CTL P
25 CP1
26 CP2
27 CN1
28 CN2
29 CTL
30 PFG
31 PGMM
32
33 D.REC Ⓗ
34
35 AUTO DET
36 REC Ⓗ
37 TRICK Ⓛ
38
76 ENV.SW
75 TST
74 POS1 B
73 POS2 A
72 CASS.SW
71
70 SERVICE/TEST
69 NTSC/PAL
68 2/6 STAB
67 SP/LP/SLP/(MOD)
66 DEW Ⓗ
65 RESET
64 OS2
63 OS1
62 P.ON Ⓛ
61 PLAY ON Ⓗ
60 TV/VTR
59 C/T Ⓛ
58 GND
57 SNS.LED
56 NTSC Ⓛ OUT
55 C/R/S/F/R
54
53 SOLENOIDE
52 C.EMPHA
51 A.EE Ⓗ
50 V.EE Ⓛ
49 A.MUTE Ⓗ
48 F.ADV
47 CAS.DOWN
46 SCAN
45 S.DATA
44 S.CLOCK
43
42 RSF
41 CURL IN
40 HEAD SW
39 x2 PLAY
C6514 0.0047
C6515 0.0033
C6516 0.01
R6525 22K
R6526 22K
C6517 6V47
R6593 220
R6528 10K
C6518 0.0047
C6519 50V1
R6532 820K
D6507 MA165
D6508 MA165
C6521 16V10
R6533 3900
R6530 39K
R6529 1500
Q6502 2SD601
C6522 0.047
R6531 1K
C6524 50V0.47
C6523 0.0056
R6534 10K
R6535 220
(CAP FG AMP)
R6536 22K
C6549 6V22
C6527 6V100
R6537 22K
C6525 0.022
R6538 2200
C6526 50V4.7
C6528 6V220
C6529 16V10
R6540 220
C6530 50V2.2
R6539 820
R6594 120K
C6531 0.047
R6597 10K
C6532 50V2.2
D6520 MA165
C6552 25V4.7
QR6512 UN2213 or DTC144EK (PULSE GENE)
R6547 2200
C6534 0.068
L6501 2.2m
R6527 2700
C6507 0.1
QR6501 DTC363EK
(SE PB GAIN SELECT)
C6562 50V3.3
C6546 50V3.3
R6522 6800
C6509 0.22
D6505 MA165
R6523 150K
D6519 MA165
C6563 100P
R6519 3300
C6510 0.22
C6555 0.22
C6561 16V470
QR6502 DTC363EK (SE PB GAIN SELECT)
C6564 6V330
D6509 MA165
R6548 10K
D6523 MA700
D6510 MA151K
JP6503 (TO MAIN1)
1 ROTARY
2 H.AMP SW
3 V.LOCK VR
4 ART V
5 ENV SELECT
6 C.T (L)
7 HEAD SW
8 AUTO TRACK
9 VSS
10 CCD SW
11 SERVICE/TEST
12 REEL SNS +8
BP6505 (TO MAIN1)
2 CTL GND
1 CTL HEAD
P6507
1 REG 6.1V
2 PFG
3 CYL ET
4 GND
5 MOTOR REG 12V
(TO CYLINDER)
JP6504 (TO MAIN1)
1 PLAY ON (H)
2 A.NTSC (L)
3 EE (L)
4 D.REC 12V
5 50Hz (H)
6 REC (H)
7 PG MM
8 A.MUTE (H)
9 CAP EC
10 FG1
11 VD
12 FG2
R6590 47K
R6549 12K
C6544 6V47
R6555 1800
R6559 1200
R6591 560
R6557 15K
R6558 15K
R6556 560
R6550 100
R6551 100
R6552 100
TP.GND
QR6507 UN2111 DTA114EK
(SOL DRIV
R6566 120
R6565 270
R6573 470
R6574 2200
R6575 270
R6576 22K
R6579 220
IC6505 AN6914S
VCC
QR6510 UN2111 DTA114EK (LED DRIVE)
C6553 0.1
R6554 3900
C6560

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE
WHEN REPLACING ANY OF THESE C

CHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP
CYLINDER SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO PHASE LOOP


IC6503 MN6740VCZK7
1 VDD
2 ROTARY
3 H.AMP SW
4 ART.V.MM
5 ART.V.OUT
6 SLOW TR.MM
7 SLOW TR.R
8 T.PHOTO
9 S.PHOTO
10 CAE
11 CYL.ET
12 ENO
13 VSS
14 REEL
15 A.SH
16 AFB
17 AFG
18 VDA
19 VSA
20 ORE
21 IRE
22 GND (CTL)
23 CTL IN
24 CTL P
25 CP1
26 CP2
27 CN1
28 CN2
29 CTL
30 PFG
31 PGMM
32
33 D.REC Ⓗ
34
35 AUTO DET
36 REC Ⓗ
37 TRICK Ⓛ
38
76 ENV.SW
75 TST
74 POS1 B
73 POS2 A
72 CASS.SW
71
70 SERVICE/TEST
69 NTSC/PAL
68 2/6 STAB
67 SP/LP/SLP /(MOD)
66 DEW Ⓗ
65 RESET
64 OS2
63 OS1
62 P.ON Ⓛ
61 PLAY ON Ⓗ
60 TV/VTR
59 C/T Ⓛ
58 GND
57 SNS.LED
56 NTSC Ⓛ OUT
55 C/R/S/F/R
54
53 SOLENOIDE
52 C.EMPHA
51 A.EE Ⓗ
50 V.EE Ⓛ
49 A.MUTE Ⓗ
48 F.ADV
47 CAS.DOWN
46 SCAN
45 S.DATA
44 S.CLOCK
43
42 RSF
41 CURL IN
40 HEAD SW
39 x2 PLAY
(CCD SW SELECT)
QR6503 UN2213 DTC144EK (PAL/E·E:ON)
D6506 MA165
D6521 MA151K
R6524 10K
L6503 VLP0074
C6512 6V22
C6513 0.1
C6514 0.047
C6515 0.0033
C6516 0.01
R6525 22K
R6526 22K
C6517 6V47
R6593 220
R6528 10K
C6518 0.0047
C6519 50V1 Ⓝ
R6532 820K
D6507 MA165
D6508 MA165
C6521 16V10
R6533 3900
R6530 39K
QR6502 2SD601
R6529 1500
C6522 0.047
R6531 1K
C6524 50V0.47
C6523 0.0056
R6534 22K
R6535 220
(CAP FG AMP)
R6536 22K
C6549 6V22
C6527 6V100
R6537 22K
C6526 50V4.7
C6525 0.022
R6538 2200
C6528 6V220
C6529 16V10
R6540 220
C6530 50V2.2 Ⓝ
R6539 820
R6594 120K
C6531 0.047
C6532 50V2.2
C6509 0.22
R6597 10K
D6520 MA165
C6552 25V4.7
QR6512 UN2213 or DTC144EK (PULSE GENE)
R6547 2200
C6534 0.068
R6523 150K
D6519 MA165
D6509 MA165
R6548 10K
R6590 47K
R6549 12K
C6544 6V47
R6555 1800
R6559 1200
R6557 15K
R6558 15K
R6560 33K
R6561 33K
R6562 3300
R6591 560
R6556 560
R6550 100
R6551 100
R6552 100
TP.GND
D6522 MA723
QR6507 UN2111 DTA114EK (SOLENOID DRIVE)
R6566 120
R6565 270
R6545 5600
R6564 5600
D6517 MA165
R6567 1500
Q6506 2SD893
R6568 ERD25 1R0P
D6538 6V47
D6518 MA165
(SOLENOID DRIVE)
(SOLENOID DRIVE HOLD)
D6515 MA165
D6512 MA165
Q6507 2SD973
C6537 16V33
D6511 ERA15-01 or 1ES1
R6569 390
C6559 16V33
R6589 150K
D6516 MA165
R6571 10K
IC6504 MN1280R
C6539 0.1
R6572 470
C6540 6V33
D6513 MA165
R6563 68K
R6592 560
R6573 470
R6574 2200
R6576 22K
R6577 820K
R6578 1M
R6575 270
R6579 220
D6514 MA151K
IC6505 AN6914S
VCC
GND
R6570 5600
QR6508 UN2213 DTC144EK (INV.)
R6588 5600
QR6509 UN2113 DTA144EK (LED DRIVE)
R6580 10K
C6541 0.01
Q6508 2SD638 (LED DRIVE)
R6581 ERD2FCG220P 22
R6582 1500
Q6509 2SB790RS (SAFETY TAB:ON)
QR6510 UN2111 DTA114EK (LED DRIVE)
C6553 0.1
C6502 100u
C6554 6V47
R6541 10K
(CLOCK OSC)
Q6513 2SC2206
C6558 0.01
X6501 V5X0244
C6556 180P
C6560 15P
R6544 33K
C6557 100P
R6542 1800
R6543 1000
R6585 15K
R6584 5600
R6583 3300
QR6511 UN2213 DTC144EK (DELAYED REC:ON)
C6545 6V220
Q6510 2SB790 (DELAYED REC:ON)
R6586 2200
R6587 2200
C6550 3300P
R6554 3900
D6523 MA700
D6510 MA151K
R6598 220
R6595 220
C6547 270P
C6548 270P
JP6506 (TO S-PTR)
1 T.PHOTO
2 S.PHOTO
3 CASS SW
4 GND
P6509 (TO MAIN1)
3 CYL GND
2 M.REG DOWN(H)
1 SOLENOID (+)
(TO INTERCONNECT) JP6508
1 POS.SW (B)
2 GND
3 POS.SW (A)
4 DEW SNS
5 PHOTO +B
6 REEL PLS (T)
7 ---------
8 S-TAB (L)
9 SOLENOID (+)
10 LED GND
11 SOLENOID (-)
12 SENS LED
JP6501 (TO MAIN1)
1 GND
2 GND
3 REG 5.1V
4 NON SW 6V
5 REG 12.3V
6 POWER OFF (H)
7 MOTOR REG 12V
8 C/R/S/F/R
9 MOTOR GND
JP6502 (TO MAIN1)
1 S-CLK
2 S-DATA
3 FG GND
4 CASS DOWN
5 SP(L)/LP(OO)/SLP(OO)
6 2/6 SW
7 SLOW TR FIX
8 CTL PULSE
9 CAP FG
10 R/S/F
11 GND
P1508
6 T PHOTO TR
5 S PHOTO TR
4 CASSETTE SW
3 GND
2 GND
1 S.PHOTO TR
C1502 1000P
Q1502 PN150NVS
R1503 2200
CASSETTE SW MOVING CONTACT
PHOTO TR.(T) C.B.A.
P1507
1 GND
2 S.PHOTO
C1501 1000P
Q1501 PN150NVS
PHOTO TR.(S) C.B.A. (VEK3578)
MODE SW
R1502 22K
R1501 22K
P1504
1 POS SW B
2 GND
3 POS SW A
4 ------
5 PHOTO COUPLER +B
6 REEL PLS (T)
7 REEL PLS (S)
8 SAFETY TAB Ⓛ
9 SOLENOID ⊕
10 LED GND
11 SOLENOID ⊖
12 SENSOR LED
P1505
DEW
GND
DEW SENSOR
MECHANISM CONNECTION C.B.A. (VXA3820)
D1501 LN59
IC1501 DN2170
SOLENOID
SAFETY TAB SW
4
5
6
7
8
9
10
11
12
13
14
15
16
17

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WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE
SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

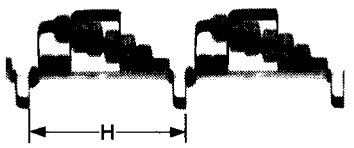
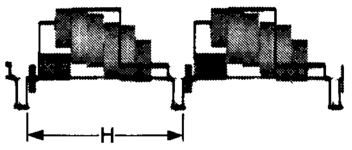
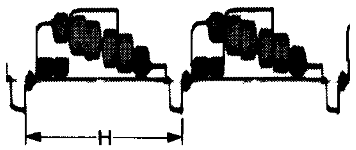
SERVO & SYSTEM CONTROL C.B.A. 0.32H SECTION ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC3801										SUB SERVO PACK PIN									
				PIN NO.	1	2	3	4	5	6	7	8	9		1	2	3	4	5	6	7			
NTSC		PAL	REC		2.3	0	2.3	0	0	2.3	0	1.0	4.9		0	12.2	5.6	1.3	4.9	0	3.3			
	PAL	NTSC	PLAY		2.3	0	3.2	0	0	3.3	0	2.1	4.9		0	12.2	3.4	2.2	4.9	0	0.9			
PAL		SECAM	REC		2.3	0	2.3	0	0	3.2	0	2.0	4.9		0	12.2	5.6	2.1	4.9	0	4.8			
	SECAM	PAL	PLAY		2.3	0	3.2	0	0	3.2	0	1.9	4.9		0	12.2	3.3	2.1	4.9	0	0.9			
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC3901																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
NTSC		PAL	REC		3.9	3.1	5.1	1.8	1.7	2.1	2.9	0	3.0	0	2.6	3.0	2.8	1.6						
	PAL	NTSC	PLAY		4.0	3.1	5.1	1.9	1.7	2.1	2.9	0	2.9	0	2.6	3.0	2.8	1.6						
PAL		SECAM	REC		4.0	3.1	5.1	1.9	1.7	2.1	2.9	0	2.9	0	2.6	3.0	2.8	1.6						
	SECAM	PAL	PLAY		4.0	3.1	5.1	1.9	1.7	2.1	2.9	0	2.9	0	2.6	3.0	2.8	1.6						
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC3902																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		6.0	0	4.7	0	4.6	4.6	3.3	6.0	6.0	0	6.0	0	12.1	6.0	0	6.0				
	PAL	NTSC	PLAY		6.0	6.4	4.6	0	4.6	4.6	0	6.0	6.0	0	6.0	0	12.1	6.0	0	6.0				
PAL		SECAM	REC		6.0	0	4.6	0	4.6	4.6	4.8	6.0	6.0	0	5.9	0	12.1	6.0	0	5.9				
	SECAM	PAL	PLAY		6.0	6.4	4.0	0	4.7	4.6	0.9	6.0	6.0	0	6.0	0	12.1	6.0	0	6.0				
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC3903																			
				PIN NO.	1	2	3	4	5	6	7	8	9											
NTSC		PAL	REC		7.5	7.0	12.1	7.7	0	7.8	2.5	0.4	0.1											
	PAL	NTSC	PLAY		7.6	7.0	12.1	7.7	0	7.8	2.5	0.4	0.1											
PAL		SECAM	REC		7.5	7.0	12.1	7.7	0	7.5	2.5	0.3	0.1											
	SECAM	PAL	PLAY		7.5	7.0	12.1	7.7	0	7.5	2.5	0.3	0.1											

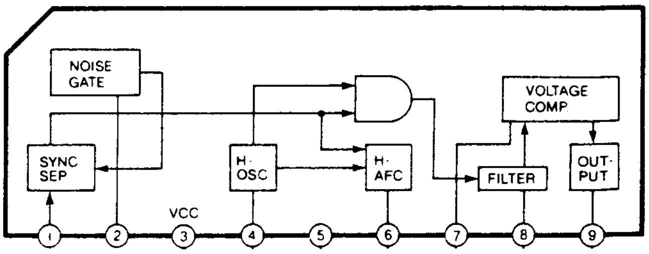
SERVO & SYSTEM CONTROL C.B.A. 0.32H SECTION TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3801			Q3802			Q3803			Q3901			Q3902			Q3903		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		4.9	4.9	5.6	11.8	4.4	11.2	0.9	11.2	1.5	5.1	12.2	5.8	1.6	11.6	2.1	12.2	5.3	11.6
	PAL	NTSC	PLAY		2.8	4.9	3.4	11.8	4.4	11.2	0.9	11.2	1.5	5.1	12.2	5.8	1.6	11.6	2.1	12.2	5.4	11.6
PAL		SECAM	REC		4.9	4.9	5.6	11.8	4.4	11.2	0.9	11.2	1.5	5.1	12.2	5.8	1.6	11.6	2.1	12.2	5.4	11.6
	SECAM	PAL	PLAY		2.7	4.9	3.4	11.8	4.5	11.2	0.9	11.2	1.5	5.1	12.2	5.8	1.6	11.6	2.1	12.2	5.4	11.6
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3904			Q3905			Q3906			Q3907			Q3908			Q3909		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	REC		4.7	12.2	5.3	2.6	0	2.0	4.0	12.1	4.6	5.3	12.1	5.9	4.0	12.1	4.6	5.2	0	4.7
	PAL	NTSC	PLAY		4.7	12.2	5.4	2.6	0	2.0	4.0	12.1	4.6	5.3	12.1	5.9	4.0	12.1	4.6	5.2	0	4.7
PAL		SECAM	REC		4.8	12.2	5.4	2.6	0	2.0	4.0	12.1	4.6	5.3	12.1	5.9	4.0	12.1	4.6	5.2	0	4.8
	SECAM	PAL	PLAY		4.8	12.2	5.4	2.6	0	2.0	4.0	12.1	4.6	5.3	12.1	5.9	3.9	12.1	4.6	5.2	0	4.8

WAVEFORM OF CCD PACK PINS

PIN NO.	WAVE FORM
3	 PLAY 1.8Vp-p
4	 REC 2.0Vp-p
4	 PLAY 2.2Vp-p

IC3903 AN5421N



SERVO & SYSTEM CONTROL C.B.A. 0.32H SECTION TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR3801			QR3802			QR3803			QR3901			QR3902					
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
NTSC		PAL	REC		0	0	5.0	2.2	2.2	0	0	0	5.0	0	0.1	3.4	0	0.1	0.1			
	PAL	NTSC	PLAY		0	0	0	1.3	1.3	4.0	0	4.0	0	0	6.9	0.9	0	0	6.9			
PAL		SECAM	REC		0	0	0	2.2	2.2	4.3	0	4.3	0	0	0	4.8	0	0.1	0			
	SECAM	PAL	PLAY		0	0	0	1.3	1.3	4.0	0	4.0	0	0	6.9	0.9	0	0	6.9			

CCD C.B.A. TRANSISTOR DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q3804			Q3805														
				PIN NO.	E	C	B	E	C	B												
NTSC		PAL	REC		1.4	0	0.7	4.1	4.9	2.7												
	PAL	NTSC	PLAY		1.4	0	0.7	1.9	4.9	2.5												
PAL		SECAM	REC		1.3	0	0.7	4.1	4.9	2.8												
	SECAM	PAL	PLAY		1.3	0	0.7	1.9	4.9	2.5												

CCD C.B.A. IC DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC3802																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
NTSC		PAL	REC		0.1	0	8.2	5.0	0	0	5.7	0.1	9.7	0	4.7	0	0.1	0	4.0	2.1				
	PAL	NTSC	PLAY		6.2	0	8.1	12.5	0	0	3.3	3.6	9.7	0	4.0	0	0.2	0	2.6	1.5				
PAL		SECAM	REC		0	0	8.3	5.0	0	0	5.7	0	9.7	0	4.6	0	0	0	4.5	2.1				
	SECAM	PAL	PLAY		6.2	0	8.2	12.5	0	0	3.3	3.6	9.7	0	3.9	0	6.2	0	2.6	1.5				

SERVO & SYSTEM CONTROL C.B.A. ICs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6501										IC6502									
				PIN NO.	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8		
NTSC		PAL	STOP		2.5	2.5	2.5	0	2.5	2.5	2.5	4.9			0	2.5	2.5	0	2.5	2.5	0	4.9		
	PAL	NTSC	PLAY		2.5	2.5	2.5	0	2.5	2.5	2.5	4.9			1.6	2.5	2.5	0	2.5	2.5	1.6	4.9		
NTSC		PAL	FF		2.5	2.5	2.5	0	2.5	2.5	2.5	4.9			1.5	2.5	2.5	0	2.5	2.5	1.5	4.9		
PAL		SECAM	STOP		2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			0	2.5	2.5	0	2.5	2.5	0	5.0		
	SECAM	PAL	PLAY		2.5	2.5	2.5	0	2.5	2.5	2.5	5.0			1.7	2.5	2.5	0	2.5	2.5	1.7	5.0		
PAL		SECAM	FF		2.5	2.5	2.5	0	2.5	2.5	2.5	4.9			1.5	2.5	2.5	0	2.5	2.5	1.5	4.9		

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6503																			
				PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
NTSC		PAL	STOP		5.1	5.0	0	0	0	0	2.5	3.0	3.0	0.1	4.3	1.2	2.5	5.1	2.5	2.5	2.5	5.1	0	2.5
	PAL	NTSC	PLAY		5.1	5.0	0	0	0	0	2.5	3.0	3.0	2.5	2.4	2.7	2.5	5.1	2.5	2.5	2.5	5.1	0	2.5
NTSC		PAL	FF		5.1	5.0	0	0	0	0	2.5	3.0	3.0	2.6	4.3	1.2	2.5	3.8	2.5	2.5	2.5	5.1	0	2.5
PAL		SECAM	STOP		5.1	5.0	0	0	0	0	2.5	3.0	3.0	0.1	4.3	1.2	2.5	5.1	2.5	2.5	2.5	5.1	0	2.5
	SECAM	PAL	PLAY		5.1	3.9	0	0	0	0	2.5	3.0	3.0	2.5	2.4	2.9	2.5	5.1	2.5	2.5	2.5	5.1	0	2.5
PAL		SECAM	FF		5.1	5.0	0	0	0	0	2.5	3.0	3.0	2.5	4.3	1.2	2.5	3.8	2.5	2.5	2.5	5.1	0	2.5

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6503																			
				PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTSC		PAL	STOP		2.5	0	2.5	2.5	1.2	2.9	3.9	2.1	0	4.9	0	0	0	0	5.0	0	4.9	0	0	0
	PAL	NTSC	PLAY		2.5	0	2.5	2.5	1.3	2.5	4.0	3.2	5.0	1.3	3.5	0	0	0	5.0	0	4.9	0	0	5.0
NTSC		PAL	FF		2.5	0	2.5	2.5	1.5	1.6	3.8	3.5	3.0	4.9	0	0	0	0	5.0	0	4.9	0	0	0
PAL		SECAM	STOP		2.5	0	2.5	2.5	1.2	2.9	4.0	2.1	5.0	4.9	0	0	0	0	5.0	0	4.9	0	0	0
	SECAM	PAL	PLAY		2.5	0	2.5	2.5	1.3	2.5	4.0	3.2	5.1	1.5	3.5	0	0	0	5.0	0	4.9	0	0	4.7
PAL		SECAM	FF		2.5	0	2.5	2.5	1.5	1.6	3.7	3.5	3.0	4.9	0.1	0	0	0	0	0	4.9	0	0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6503																			
				PIN NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
NTSC		PAL	STOP		5.0	2.1	0	4.7	4.8	5.0	0	0	0	0	5.0	5.0	5.0	0	0	5.0	4.7	0	5.0	0
	PAL	NTSC	PLAY		5.0	0	0	4.7	4.8	5.0	0	0	0	5.0	0	5.0	5.0	0	5.0	5.0	4.7	0	5.0	0
NTSC		PAL	FF		5.0	0	0	4.8	4.8	5.0	0	0	0	0	5.0	5.0	5.0	0	0	5.0	4.7	0	5.1	0
PAL		SECAM	STOP		5.0	2.1	0	4.7	4.7	5.0	0	0	0	0	5.0	5.0	5.0	0	0	5.0	4.7	0	5.0	0
	SECAM	PAL	PLAY		5.0	0	0	4.7	4.8	5.0	0	0	0	5.0	0	5.0	5.0	0	5.0	5.0	4.7	0	5.0	0
PAL		SECAM	FF		5.0	0	0	4.7	4.8	5.0	0	0	0	0	5.0	5.0	5.0	0	0	5.0	47	0	5.0	0

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6503																			
				PIN NO.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76				
NTSC		PAL	STOP		0	0	—	—	5.1	0	0	0.3	4.9	5.0	5.0	2.0	5.0	2.0	0	4.3				
	PAL	NTSC	PLAY		5.0	0	—	—	5.1	0	0	0.3	4.8	5.0	5.0	2.0	0	5.0	0	4.9				
NTSC		PAL	FF		0	0	—	—	5.1	0	0	0.3	4.9	5.0	5.0	2.0	5.0	2.0	0	4.3				
PAL		SECAM	STOP		0	0	—	—	5.1	0	0	0.3	4.9	5.0	5.0	2.0	5.0	2.0	0	4.3				
	SECAM	PAL	PLAY		5.0	0	—	—	5.1	0	0	0.3	4.8	5.0	5.0	2.0	0	5.0	0	4.9				
PAL		SECAM	FF		0	0	—	—	5.1	0	0	0.3	4.9	5.0	5.0	2.0	5.0	2.0	0	4.3				

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	IC6504										IC6505									
				PIN NO.	1	2	3								1	2	3	4	5	6	7	8		
NTSC		PAL	STOP		5.1	5.1	0								0.1	1.5	5.0	0	0	0.3	0	5.1		
	PAL	NTSC	PLAY		5.1	5.1	0								0.1	1.5	5.0	0	0	0.3	0	5.1		
NTSC		PAL	FF		5.1	5.1	0								0	1.5	5.1	0	0	0.3	0	5.1		
PAL		SECAM	STOP		5.1	5.1	0								0.1	1.5	5.0	0	0	0.3	0	5.1		
	SECAM	PAL	PLAY		5.1	5.1	0								0	1.5	5.0	0	0	0.3	0	5.1		
PAL		SECAM	FF		5.1	5.1	0								0.1	1.5	5.0	0	0	0.3	0	5.1		

SERVO & SYSTEM CONTROL C.B.A. TRANSISTORs DC VOLTAGE CHART

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q6508			Q6509			Q6510			Q6511			Q6512			Q6513		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	STOP		0.9	12.8	0.7	12.2	12.2	11.5	12.2	0.1	12.2	0	0	0	0	0	0	—	5.1	—
	PAL	NTSC	PLAY		0.9	9.8	0.7	12.2	12.2	11.5	12.2	0.1	12.2	1.7	0.9	1.8	1.7	0.9	1.8	—	5.1	—
NTSC		PAL	FF		0.9	12.7	0.7	12.2	12.2	11.5	12.2	0.1	12.2	1.5	0.9	1.5	1.5	0.9	1.7	—	5.1	—
PAL		SECAM	STOP		0.9	12.8	0.7	12.2	12.2	11.5	12.2	0.1	12.2	0	0	0	0	0	0	—	5.1	—
	SECAM	PAL	PLAY		0.9	9.8	0.7	12.2	12.2	11.5	12.2	0.1	12.2	1.7	0.9	1.8	1.7	0.9	1.9	—	5.1	—
PAL		SECAM	FF		0.9	12.7	0.7	12.2	12.2	11.5	12.2	0.1	12.2	1.5	0.9	1.5	1.5	0.9	1.7	—	5.1	—

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	Q6501			Q6502			Q6506			Q6507								
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B						
NTSC		PAL	STOP		0.3	2.7	1.0	0.4	2.5	1.0	13.6	13.6	5.1	0	13.6	0						
	PAL	NTSC	PLAY		0.3	2.7	1.0	0.4	2.5	1.0	13.5	13.5	5.2	0	13.5	0						
NTSC		PAL	FF		0.3	2.7	1.5	0.4	2.5	1.0	13.6	13.6	5.2	0	13.6	0						
PAL		SECAM	STOP		0.3	2.7	1.0	0.4	2.5	1.0	13.6	13.6	5.2	0	13.6	0						
	SECAM	PAL	PLAY		0.3	2.7	1.0	0.4	2.5	1.0	13.5	13.5	5.2	0	13.5	0						
PAL		SECAM	FF		0.3	2.7	1.0	0.4	2.5	1.0	13.6	13.6	5.2	0	13.6	0						

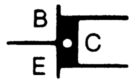
INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR6501			QR6502			QR6503			QR6507			QR6508			QR6509		
				PIN NO.	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
NTSC		PAL	STOP		0	0	4.9	0	0	4.9	0	0	4.6	5.1	0	5.0	0	0	5.0	4.9	0.7	4.7
	PAL	NTSC	PLAY		0	0	4.9	0	0	4.9	0	0	4.4	5.1	0	5.0	0	0	5.0	4.9	0.7	4.7
NTSC		PAL	FF		0	0	4.9	0	0	4.9	0	0	4.6	5.1	0	5.0	0	0	5.0	4.9	0.7	4.7
PAL		SECAM	STOP		0	0	4.9	0	0	4.9	0	0	4.6	5.1	0	5.0	0	0	5.0	5.0	0.7	4.7
	SECAM	PAL	PLAY		0	0	4.9	0	0	4.9	0	0	4.4	5.1	0	5.0	0	0	5.0	5.0	0.7	4.7
PAL		SECAM	FF		0	0	4.9	0	0	4.9	0	0	4.6	5.1	0	5.0	0	0	5.0	5.0	0.7	4.7

INPUT SIGNAL	PLAY BACK TAPE	TV SYSTEM SELECT	MODE	REF NO.	QR6510			QR6511			QR6512											
				PIN NO.	E	C	B	E	C	B	E	C	B									
NTSC		PAL	STOP		4.9	4.8	0	0	12.2	0	0	0	0									
	PAL	NTSC	PLAY		4.9	4.8	0	0	12.2	0	0	0	3.3									
NTSC		PAL	FF		4.9	4.8	0	0	12.2	0	0	1.0	0									
PAL		SECAM	STOP		5.0	4.9	0	0	12.2	0	0	0	0									
	SECAM	PAL	PLAY		5.0	4.8	0	0	12.2	0	0	0	3.3									
PAL		SECAM	FF		4.9	4.8	0	0	12.2	0	0	0.9	0									

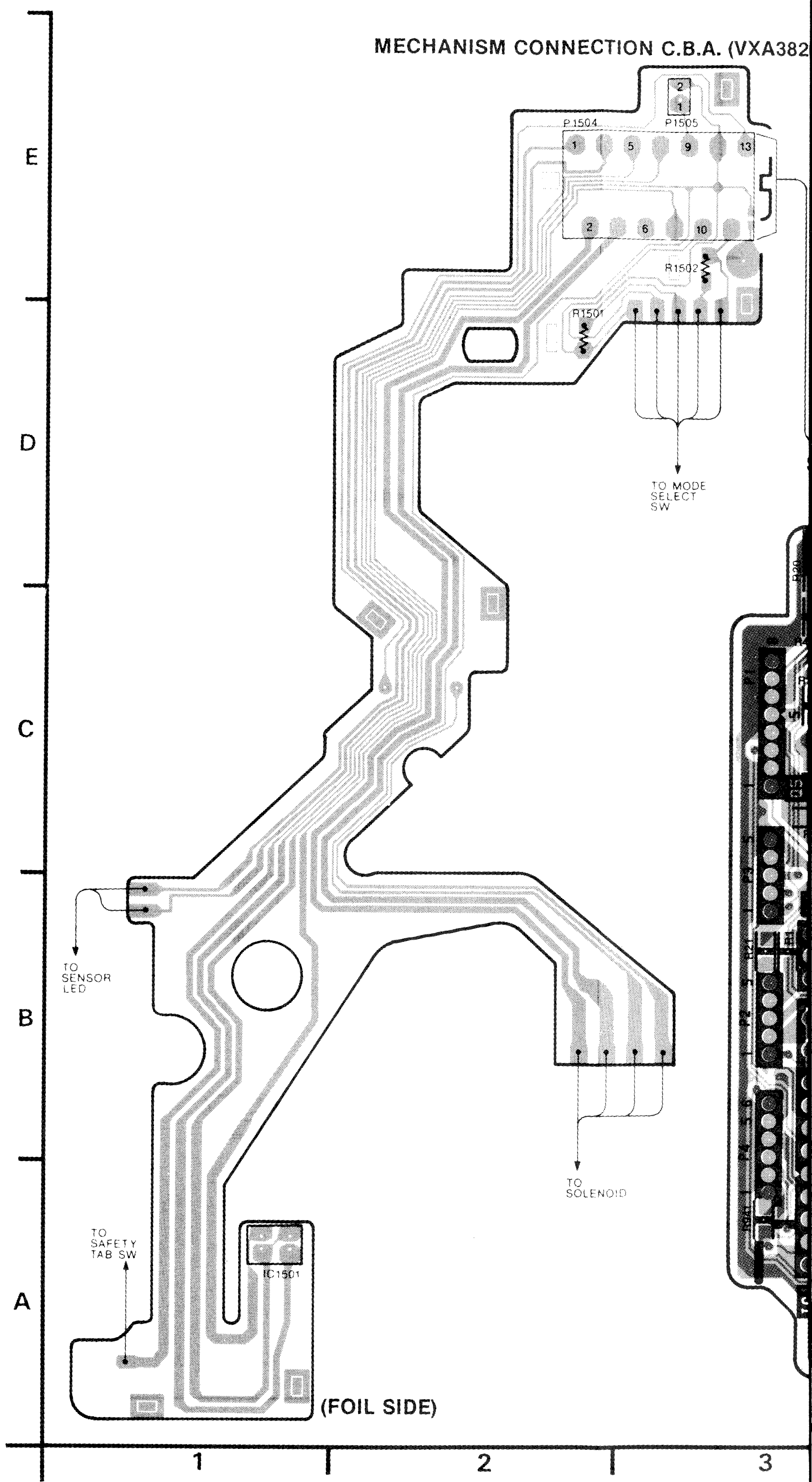
SERVO & SYSTEM CONTROL C.B.A.					
Transistor		QR3802	A-4	**Adjustment**	
Q3801	B-3	QR3803	A-4	VR3801	A-4
Q3802	B-4	QR3901	C-4	VR3802	B-5
Q3803	B-4	QR3902	C-4	VR3901	C-4
Q3804	D-5	QR6501	B-5	VR3902	C-4
Q3805	D-4	QR6502	B-5	**Connector**	
Q3901	B-3	QR6503	B-5	BP6505	A-6
Q3902	B-4	QR6507	C-6	JP6501	A-3
Q3903	B-4	QR6508	C-7	JP6502	A-8
Q3904	C-4	QR6509	C-7	JP6503	A-5
Q3905	C-3	QR6510	A-8	JP6504	A-7
Q3906	C-3	QR6511	C-5	JP6506	A-6
Q3907	D-3	QR6512	A-6	JP6508	C-6
Q3908	D-3	**Integrated Circuit**		P3001	B-1
Q3909	C-5	IC3801	A-3	P3901	C-3
Q6501	B-8	IC3802	E-4	P3902	B-3
Q6502	C-8	IC3901	B-4	P3903	B-3
Q6506	C-6	IC3902	C-3	P3904	A-3
Q6507	B-6	IC3903	D-5	P6507	D-6
Q6508	C-6	IC6501	B-8	P6509	C-5
Q6509	C-6	IC6502	B-8		
Q6510	C-5	IC6503	B-6		
Q6511	B-8	IC6504	C-8		
Q6512	B-8	IC6505	B-6		
Q6513	C-7				
Transistor & Resistor		**Test Point**			
QR3801	A-4	TPGND	C-8		

ADDRESS INFORMATION

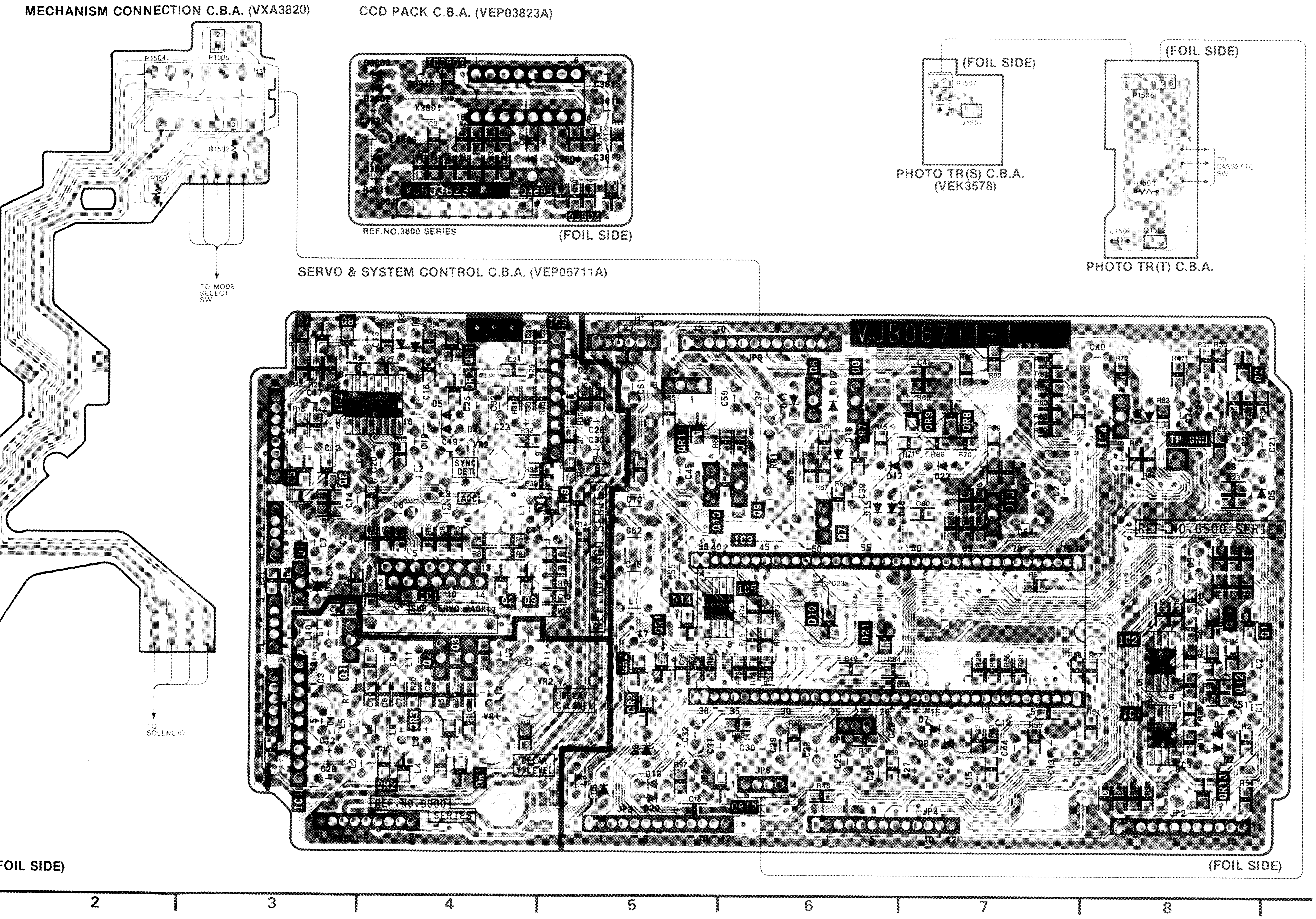
TRANSISTOR INFORMATION



SERVO & SYSTEM CONTROL C.B.A. (VEP0671



CONTROL C.B.A. (VEP06711A)

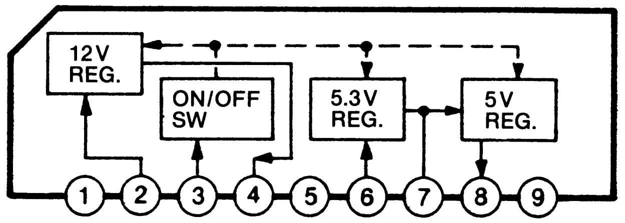

MECHANISM CONNECTION C.B.A. (VXA3820)
P1504
P1505
R1502
R1501
TO MODE SELECT SW
TO SOLENOID
OIL SIDE)
CCD PACK C.B.A. (VEP03823A)
VJB03823-1
X3801
REF.NO.3800 SERIES
(FOIL SIDE)
(FOIL SIDE)
P1507
Q1501
PHOTO TR(S) C.B.A. (VEK3578)
(FOIL SIDE)
P1508
TO CASSETTE SW
R1503
C1502
Q1502
PHOTO TR(T) C.B.A.
SERVO & SYSTEM CONTROL C.B.A. (VEP06711A)
VJB06711-1
SYNC DET
AGC
SUB SERVO PACK
REF.NO.3800 SERIES
DELAY C LEVEL
DELAY Y LEVEL
REF.NO.3800 SERIES
REF.NO.6500 SERIES
TP GND
JP8
JP6
JP3
JP4
JP2
JP8501
(FOIL SIDE)
2
3
4
5
6
7
8

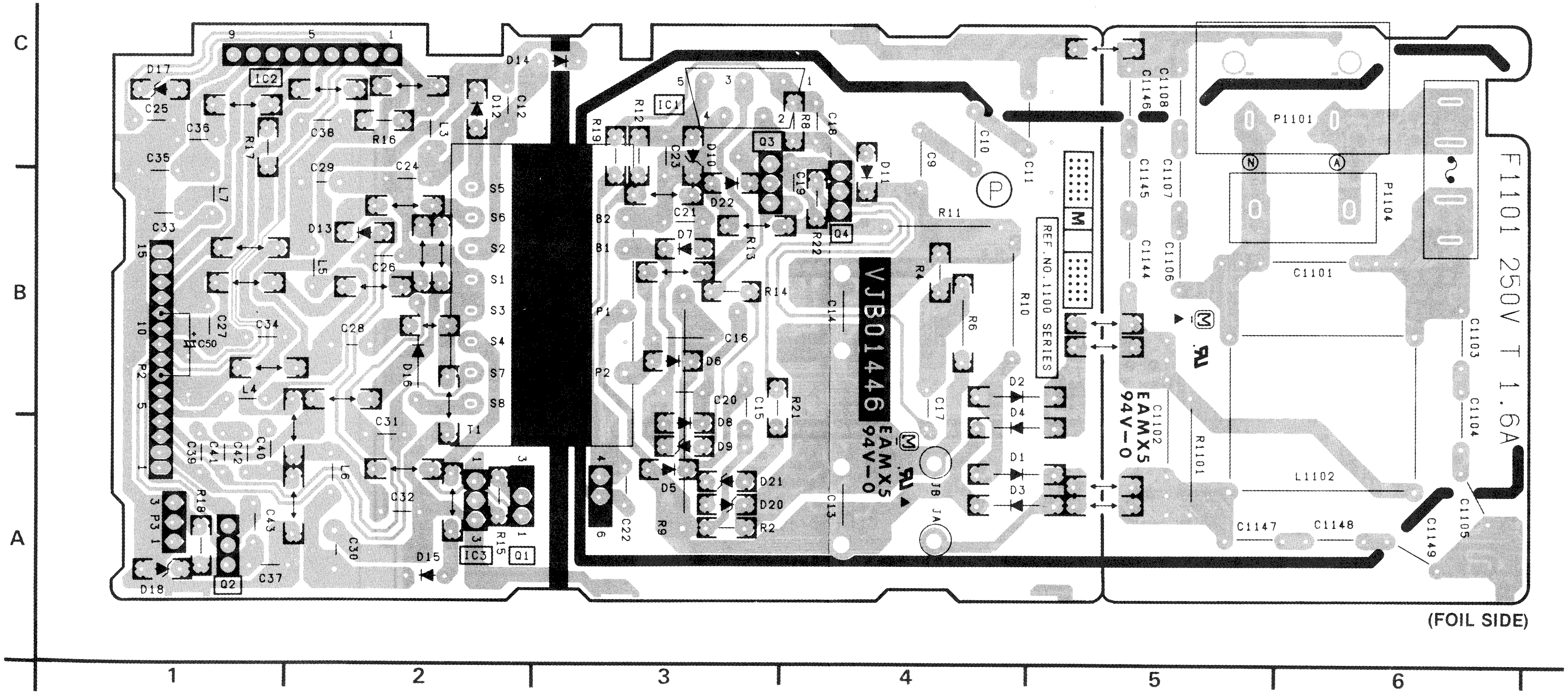
POWER SUPPLY C.B.A. (VEP01446B)

POWER SUPPLY C.B.A.	
Transistor	
Q1101	A-2
Q1102	A-1
Q1103	C-3
Q1104	B-4
Integrated Circuit	
IC1101	C-3
IC1102	C-1
IC1103	A-2
Connector	
P1101	C-6
P1102	B-1
P1103	A-1

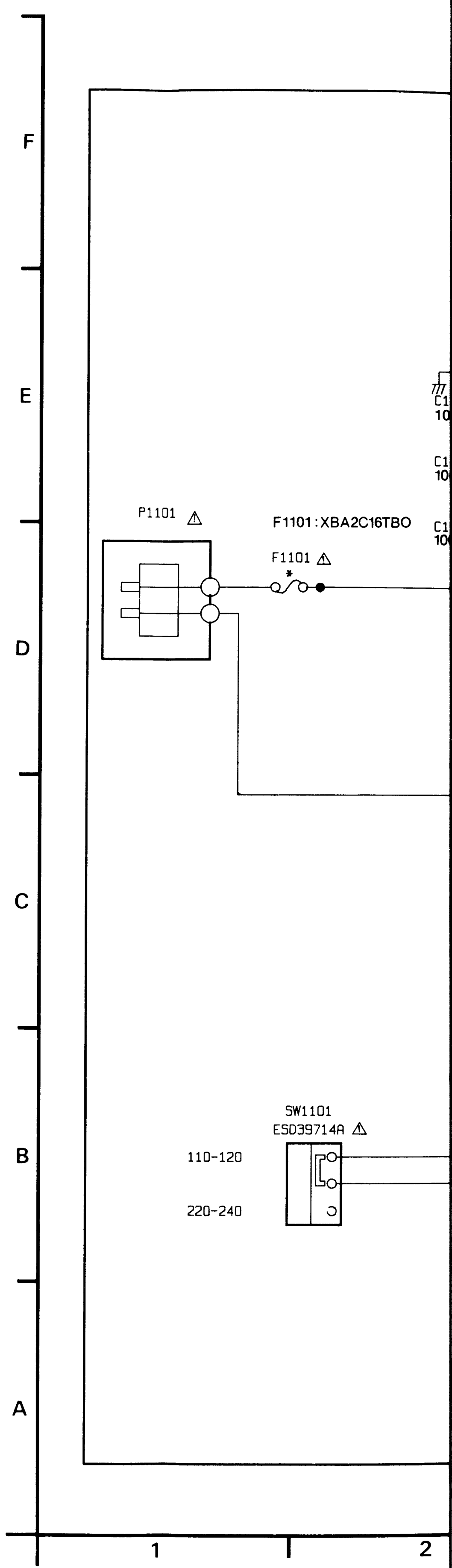
ADDRESS INFORMATION

IC1102 STK5392

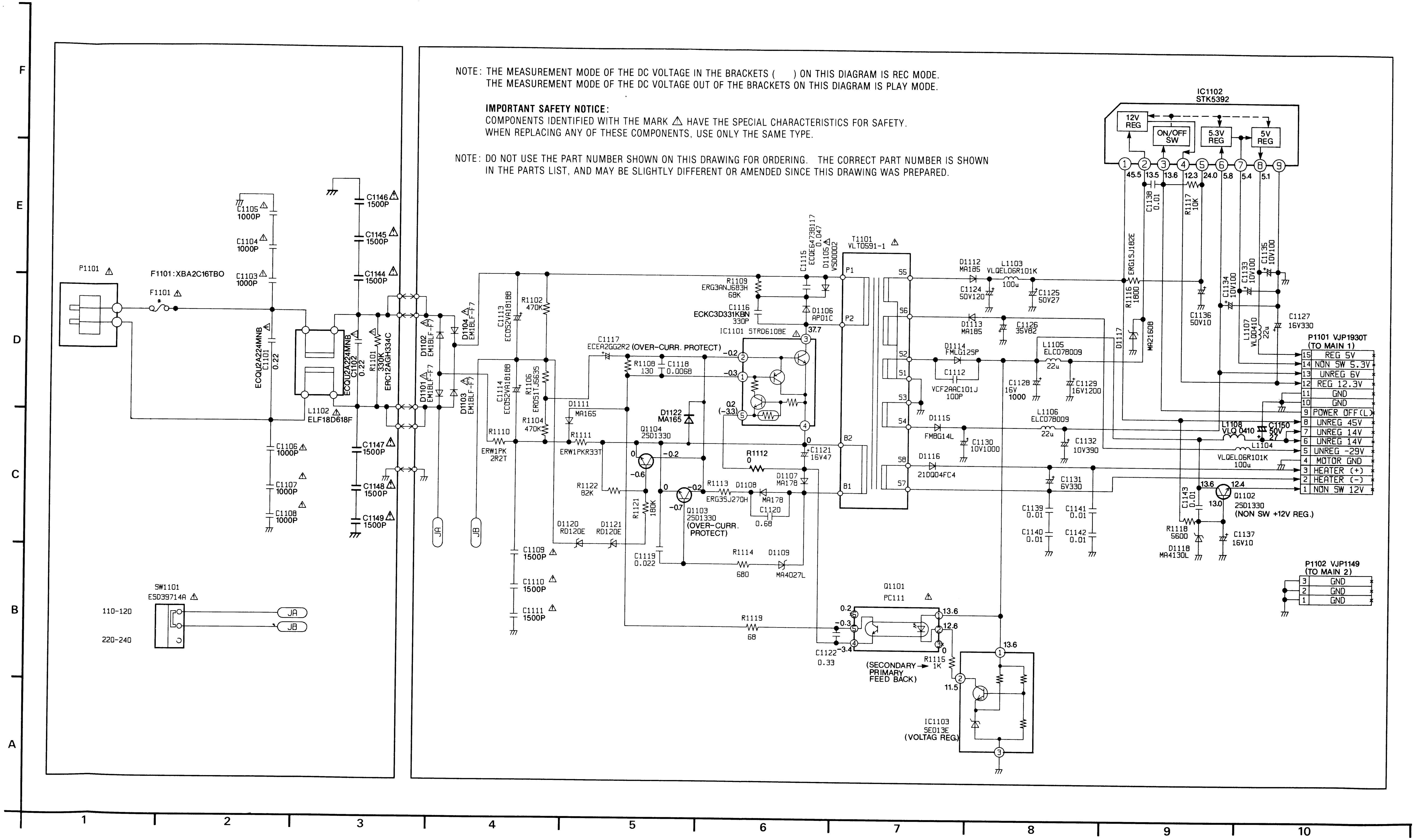

12V REG.
ON/OFF SW
5.3V REG.
5V REG.
1
2
3
4
5
6
7
8
9


C
B
A
1
2
3
4
5
6
D17
C25
C36
C35
C33
IC2
R17
R16
C38
C29
C24
L3
L7
D13
L5
C26
C27
C50
C34
C28
D16
L4
C31
T1
P2
15
10
5
1
C39
C41
C42
C40
L6
C32
C43
C30
R18
P3
Q2
C37
D18
D15
IC3
R15
Q1
D14
D12
C12
S5
S6
S2
S1
S3
S4
S7
S8
B2
B1
P1
P2
R19
R12
IC1
C23
D10
Q3
R8
C18
C19
Q4
D11
D22
C21
D7
R13
R22
R14
C16
D6
C20
C15
D8
D9
D5
D21
D20
R2
R21
R9
C22
C9
C10
C11
R11
R4
R6
R10
C14
C13
VJB01446
EAMX5
94V-0
JB
JA
C17
D2
D4
D1
D3
REF. NO. 1100 SERIES
M
P
C1146
C1108
C1145
C1107
C1144
C1106
C1102
EAMX5
94V-0
R1101
P1101
N
A
P1104
C1101
C1103
C1104
C1105
L1102
C1147
C1148
C1149
F1101 250V T 1.6A
(FOIL SIDE)

POWER SUPPLY SCHE


F
E
D
C
B
A
1
2
P1101 ⚠
F1101:XBA2C16TBO
F1101 ⚠
SW1101
ESD39714A ⚠
110-120
220-240

POWER SUPPLY SCHEMATIC DIAGRAM


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAY MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

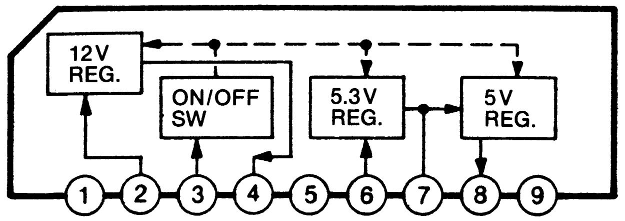
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
P1101 ⚠
F1101:XBA2C16TBO
F1101 ⚠
C1105 ⚠ 1000P
C1104 ⚠ 1000P
C1103 ⚠ 1000P
C1146 ⚠ 1500P
C1145 ⚠ 1500P
C1144 ⚠ 1500P
ECQU2A224MNB C1101 0.22
ECQU2A224MNB C1102 0.22
R1101 330K ERC12AGH334C
L1102 ⚠ ELF18D618F
D1102 EM1BLF-F7
D1101 EM1BLF-F7
D1104 EM1BLF-F7
D1103 EM1BLF-F7
C1106 ⚠ 1000P
C1107 ⚠ 1000P
C1108 ⚠ 1000P
C1147 ⚠ 1500P
C1148 ⚠ 1500P
C1149 ⚠ 1500P
JA
JB
SW1101 ESD39714A ⚠
110-120
220-240
C1113 ECOS2VA181BB
C1114 ECOS2VA181BB
R1102 470K
R1106 ERD51TJ5635
R1104 470K
R1110 ERW1PK 2R2T
R1109 ERG3ANJ683H 68K
C1116 ECKC3D331KBN 330P
C1115 ECQE6473BJ17 0.047
D1105 ⚠ VSD0002
D1106 AP01C
IC1101 STR6108E ⚠
C1117 ECEA2GG2R2 (OVER-CURR. PROTECT)
R1108 130
C1118 0.0068
D1111 MA165
R1111 ERW1PKR33T
D1122 MA165
Q1104 2SD1330
R1122 82K
R1121 180K
R1113 ERG3SJ270H
D1108 MA178
C1120 0.68
Q1103 2SD1330 (OVER-CURR. PROTECT)
D1120 RD120E
D1121 RD120E
C1119 0.022
R1114 680
D1109 MA4027L
R1112 0
D1107 MA178
C1121 16V47
C1109 ⚠ 1500P
C1110 ⚠ 1500P
C1111 ⚠ 1500P
R1119 68
C1122 0.33
Q1101 PC111 ⚠
(SECONDARY→ PRIMARY FEED BACK)
R1115 1K
IC1103 SE013E (VOLTAG REG.)
T1101 VLT0591-1 ⚠
P1 P2 B2 B1 S5 S6 S2 S1 S3 S4 S8 S7
D1112 MA185
L1103 VLQEL06R101K 100u
C1124 50V120
C1125 50V27
D1113 MA185
C1126 35V82
D1114 FMLG12SP
C1112 VCF2AAC101J 100P
L1105 ELC07B009 22u
C1128 16V 1000
C1129 16V1200
D1115 FMBG14L
L1106 ELC07B009 22u
C1130 10V1000
C1132 10V390
D1116 21DQ04FC4
C1131 6V330
C1139 0.01
C1140 0.01
C1141 0.01
C1142 0.01
D1117 MA2160B
R1116 ERG15J182E 1800
IC1102 STK5392
12V REG
ON/OFF SW
5.3V REG
5V REG
45.5 13.5 13.6 12.3 24.0 5.8 5.4 5.1
C1138 0.01
R1117 10K
C1136 50V10
C1134 10V100
C1133 10V100
C1135 10V100
L1107 VLQ0410 22u
C1127 16V330
L1108 VLQ 0410
C1150 50V 2.7
L1104 VLQEL06R101K 100u
C1143 0.01
Q1102 2SD1330 (NON SW +12V REG.)
R1118 5600
D1118 MA4130L
C1137 16V10
P1101 VJP1930T (TO MAIN 1)
15 REG 5V
14 NON SW 5.3V
13 UNREG 6V
12 REG 12.3V
11 GND
10 GND
9 POWER OFF (L)
8 UNREG 45V
7 UNREG 14V
6 UNREG 14V
5 UNREG -29V
4 MOTOR GND
3 HEATER (+)
2 HEATER (-)
1 NON SW 12V
P1102 VJP1149 (TO MAIN 2)
3 GND
2 GND
1 GND

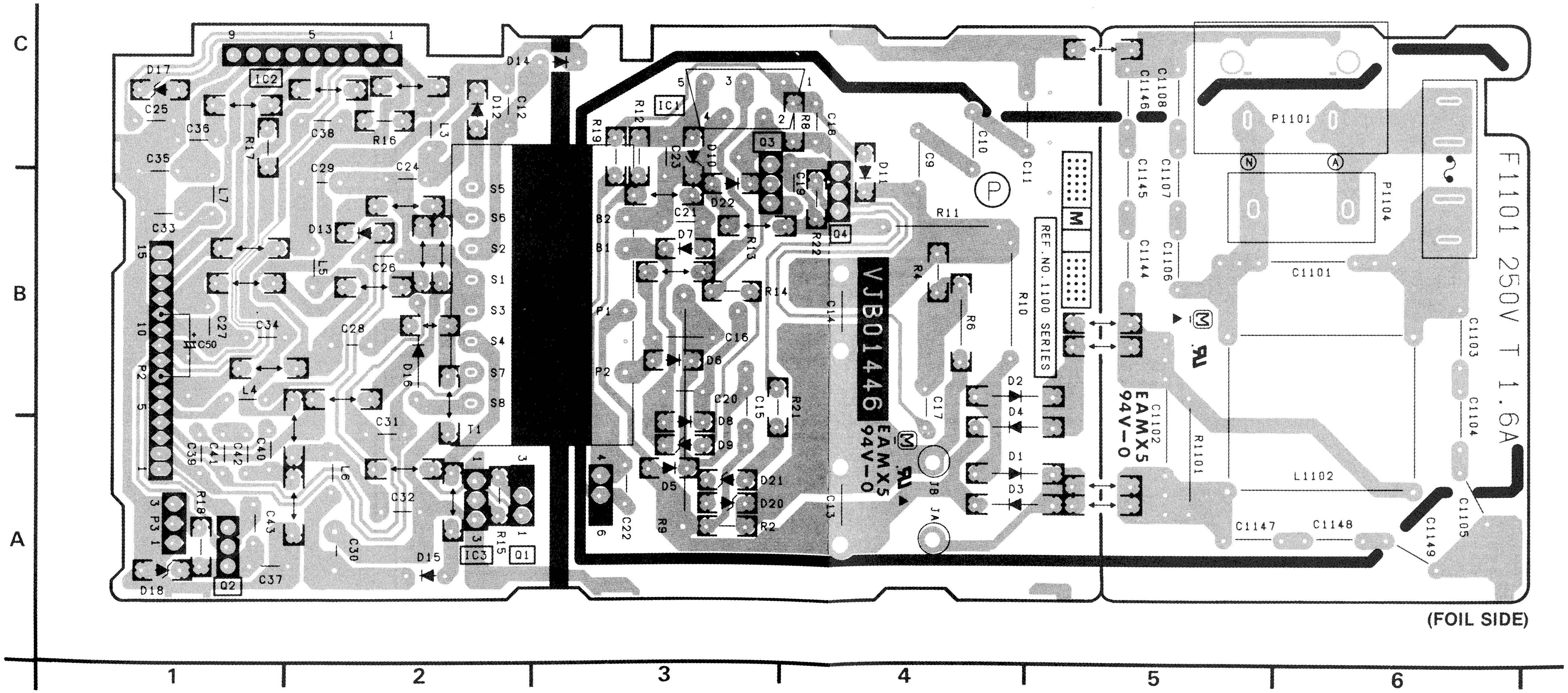
POWER SUPPLY C.B.A. (VEP01446B)

POWER SUPPLY C.B.A.	
Transistor	
Q1101	A-2
Q1102	A-1
Q1103	C-3
Q1104	B-4
Integrated Circuit	
IC1101	C-3
IC1102	C-1
IC1103	A-2
Connector	
P1101	C-6
P1102	B-1
P1103	A-1

ADDRESS INFORMATION

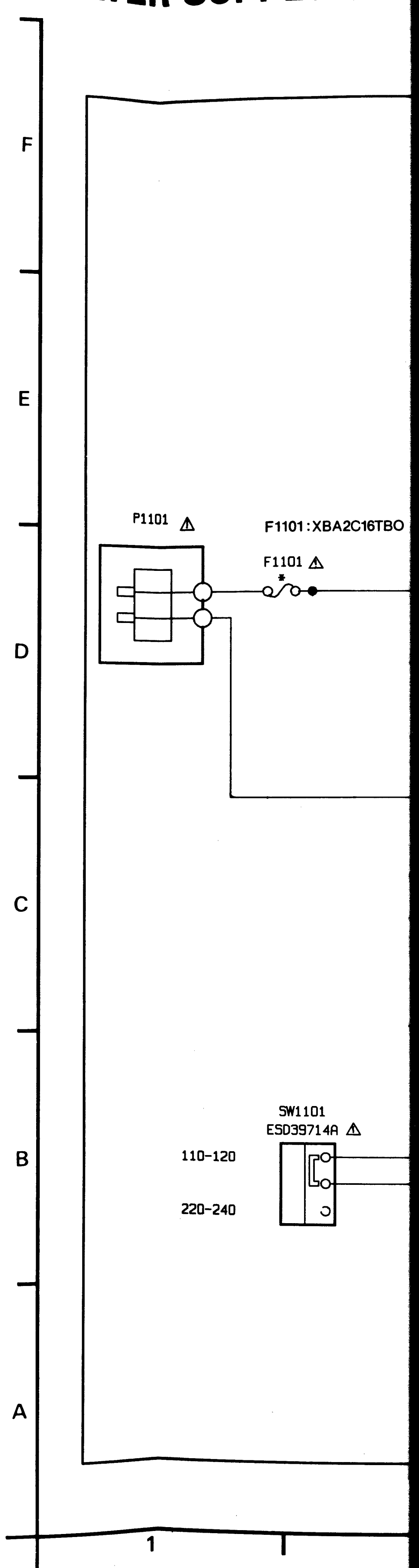
IC1102 STK5392


12V REG.
ON/OFF SW
5.3V REG.
5V REG.
1
2
3
4
5
6
7
8
9


C
B
A
1
2
3
4
5
6
D17
IC2
C25
C36
R17
C38
R16
L3
D14
D12
C12
C35
C29
C24
L7
C33
D13
L5
C26
15
10
P2
5
1
C27
C50
C34
C28
D16
L4
C31
T1
C39
C41
C42
C40
L6
C32
R18
3 P3 1
C43
C30
D18
Q2
C37
D15
IC3
Q1
R15
S5
S6
S2
S1
S3
S4
S7
S8
R12
R19
IC1
C23
D10
R8
C18
Q3
C19
D22
C21
D7
R13
R22
Q4
B2
B1
R14
P1
P2
C16
D6
C20
C15
D8
D9
D5
D21
D20
R2
R9
C22
R21
C14
C13
VJB01446
EAMX5
94V-0
D11
C9
C10
C11
R11
R4
R6
R10
C17
JB
JA
REF.NO.1100 SERIES
D2
D4
D1
D3
C1108
C1146
C1145
C1107
C1144
C1106
P1101
P1104
C1101
C1102
EAMX5
94V-0
R1101
L1102
C1147
C1148
C1149
C1103
C1104
C1105
F1101 250V T 1.6A
N
A

(FOIL SIDE)

POWER SUPPLY SCH

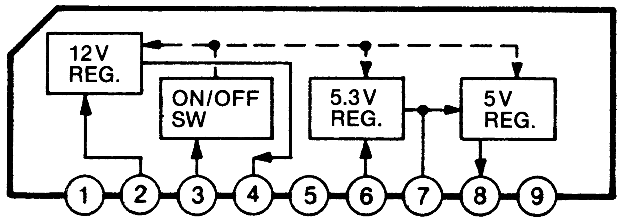

F
E
D
C
B
A
1
P1101
F1101:XBA2C16TBO
F1101
SW1101
ESD39714A
110-120
220-240

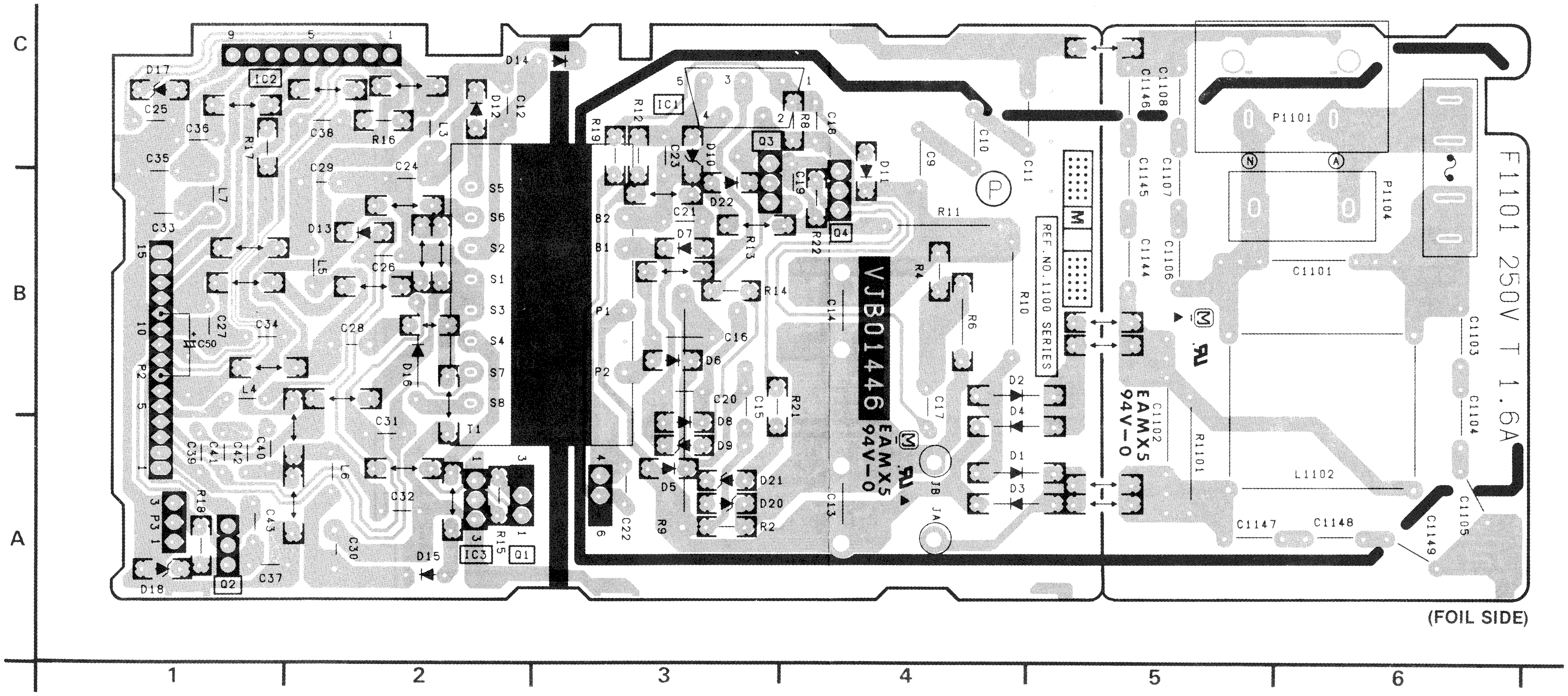
POWER SUPPLY C.B.A. (VEP01446B)

POWER SUPPLY C.B.A.	
Transistor	
Q1101	A-2
Q1102	A-1
Q1103	C-3
Q1104	B-4
Integrated Circuit	
IC1101	C-3
IC1102	C-1
IC1103	A-2
Connector	
P1101	C-6
P1102	B-1
P1103	A-1

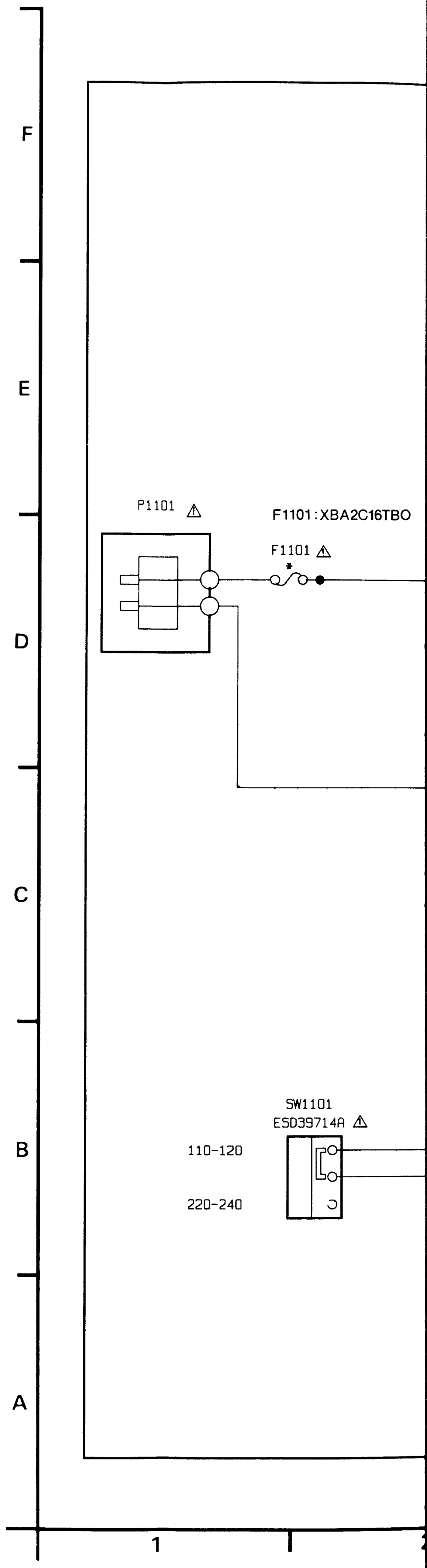
ADDRESS INFORMATION

IC1102 STK5392

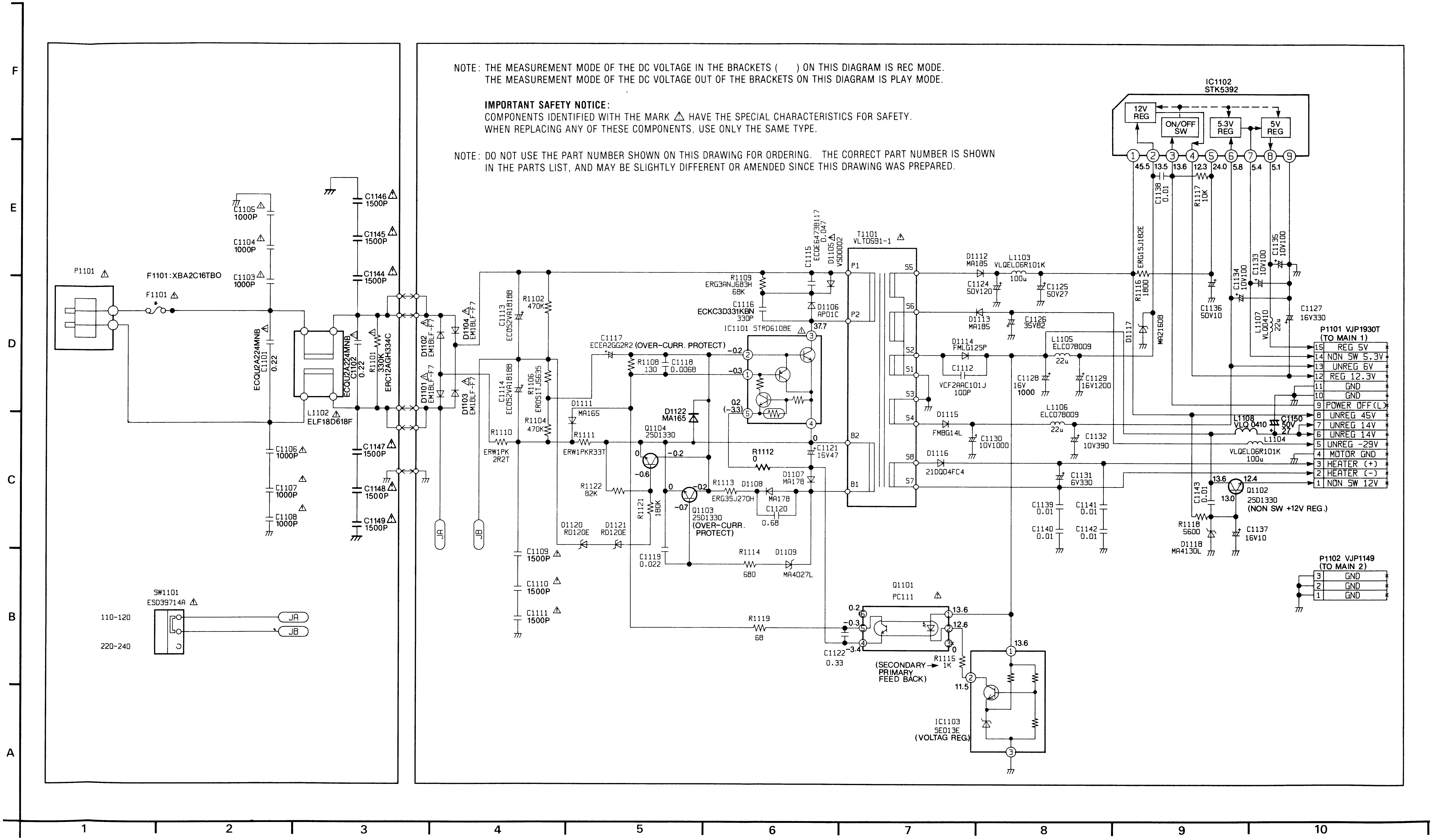

12V REG.
ON/OFF SW
5.3V REG.
5V REG.
1
2
3
4
5
6
7
8
9


C
B
A
1
2
3
4
5
6
IC1
IC2
IC3
Q1
Q2
Q3
Q4
T1
P1101
P1104
F1101 250V T 1.6A
VJB01446
REF.NO.1100 SERIES
L1102
C1101
C1102
R1101
D1
D2
D3
D4
(FOIL SIDE)

POWER SUPPLY SCH


F
E
D
C
B
A
1
P1101 ⚠
F1101:XBA2C16TBO
F1101 ⚠
SW1101
ESD39714A ⚠
110-120
220-240

POWER SUPPLY SCHEMATIC DIAGRAM



NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS REC MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAY MODE.

IMPORTANT SAFETY NOTICE:
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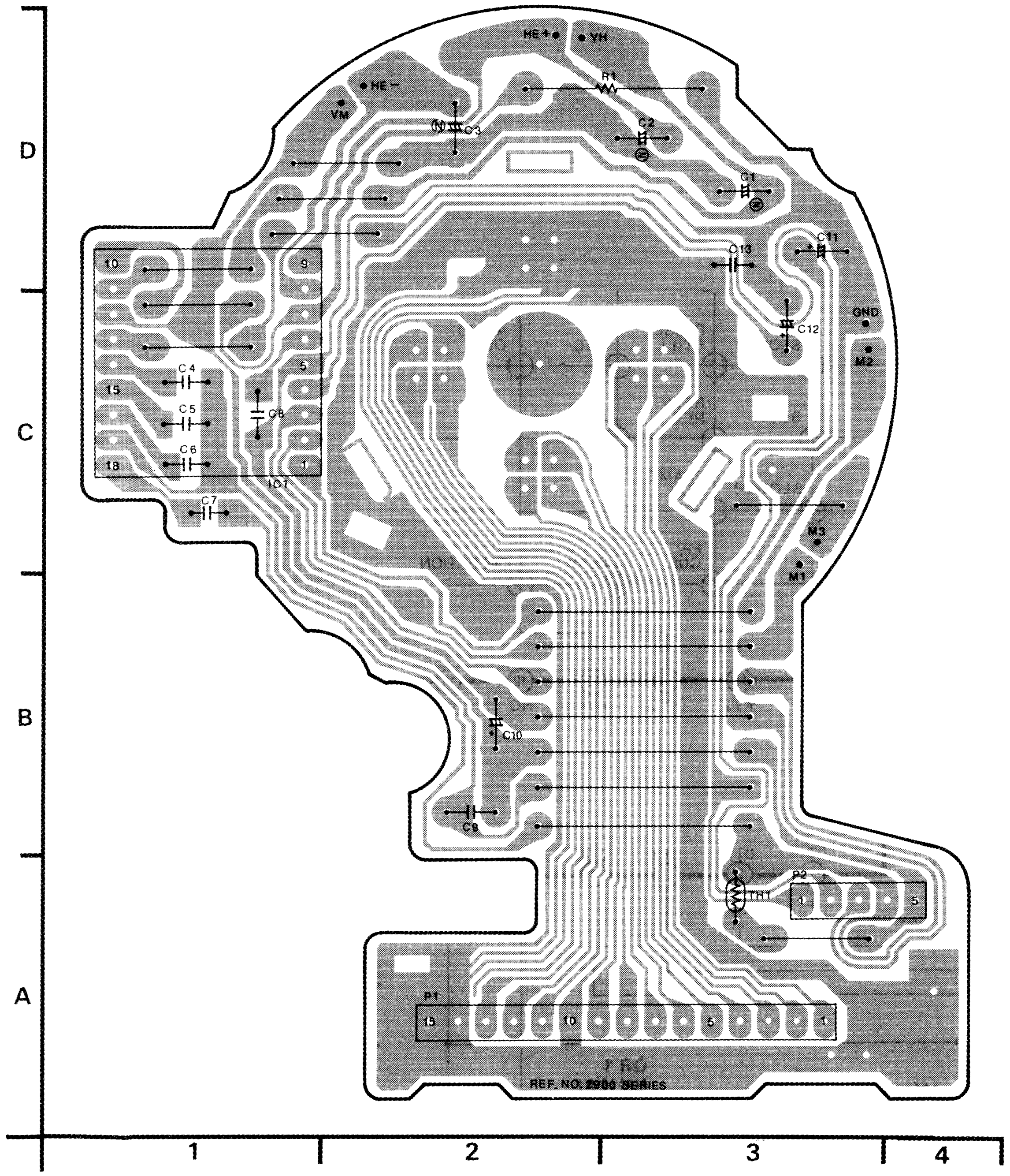
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
P1101
F1101:XBA2C16TBO
F1101
C1105 1000P
C1104 1000P
C1103 1000P
ECQU2A224MNB C1101 0.22
L1102 ELF18D618F
ECQU2A224MNB C1102 0.22
R1101 330K ERC12AGH334C
C1146 1500P
C1145 1500P
C1144 1500P
C1147 1500P
C1148 1500P
C1149 1500P
C1106 1000P
C1107 1000P
C1108 1000P
D1101 EM1BLF-F7
D1102 EM1BLF-F7
D1103 EM1BLF-F7
D1104 EM1BLF-F7
JA
JB
SW1101
ESD39714A
110-120
220-240
C1113 ECOS2VA181BB
C1114 ECOS2VA181BB
R1102 470K
R1106 ERD51TJ5635
R1104 470K
R1110 ERW1PK 2R2T
R1111 ERW1PKR33T
D1111 MA165
C1117 ECEA2GG2R2 (OVER-CURR. PROTECT)
R1108 130
C1118 0.0068
R1109 ERG3ANJ683H 68K
C1116 ECKC3D331KBN 330P
C1115 ECQE6473B117 0.047
D1105 V5D0002
D1106 AP01C
IC1101 STR06108E
37.7
-0.2
-0.3
0.2 (-3.3)
D1122 MA165
Q1104 2SD1330
-0.6
-0.2
R1122 82K
R1121 180K
Q1103 2SD1330 (OVER-CURR. PROTECT)
-0.7
R1113 ERG35J270H
D1108 MA178
C1120 0.68
D1107 MA178
R1112 0
C1121 16V47
D1120 RD120E
D1121 RD120E
C1119 0.022
R1114 680
D1109 MA4027L
C1109 1500P
C1110 1500P
C1111 1500P
R1119 68
C1122 0.33
-3.4
T1101 VLT0591-1
P1 P2 B2 B1 S5 S6 S2 S1 S3 S4 S8 S7
D1112 MA185
L1103 VLQEL06R101K 100u
C1124 50V120
C1125 50V27
D1113 MA185
C1126 35V82
D1114 FMLG125P
C1112 VCF2AAC101J 100P
L1105 ELC07B009 22u
C1128 16V 1000
C1129 16V1200
D1115 FMBG14L
C1130 10V1000
L1106 ELC07B009 22u
C1132 10V390
D1116 21DQ04FC4
C1131 6V330
C1139 0.01
C1140 0.01
C1141 0.01
C1142 0.01
Q1101 PC111
13.6
12.6
R1115 1K
(SECONDARY PRIMARY FEED BACK)
11.5
IC1103 SE013E (VOLTAG REG.)
IC1102 STK5392
12V REG
ON/OFF SW
5.3V REG
5V REG
45.5 13.5 13.6 12.3 24.0 5.8 5.4 5.1
C1138 0.01
R1117 10K
R1116 ERG15J182E 1800
D1117 MA2160B
C1136 50V10
C1134 10V100
C1133 10V100
C1135 10V100
L1107 VLQ0410 22u
C1127 16V330
L1108 VLQ 0410
C1150 50V 27
L1104 VLQEL06R101K 100u
C1143 0.01
Q1102 2SD1330 (NON SW +12V REG.)
13.6
12.4
13.0
R1118 5600
D1118 MA4130L
C1137 16V10
P1101 VJP1930T (TO MAIN 1)
15 REG 5V
14 NON SW 5.3V
13 UNREG 6V
12 REG 12.3V
11 GND
10 GND
9 POWER OFF(L)
8 UNREG 45V
7 UNREG 14V
6 UNREG 14V
5 UNREG -29V
4 MOTOR GND
3 HEATER (+)
2 HEATER (-)
1 NON SW 12V
P1102 VJP1149 (TO MAIN 2)
3 GND
2 GND
1 GND

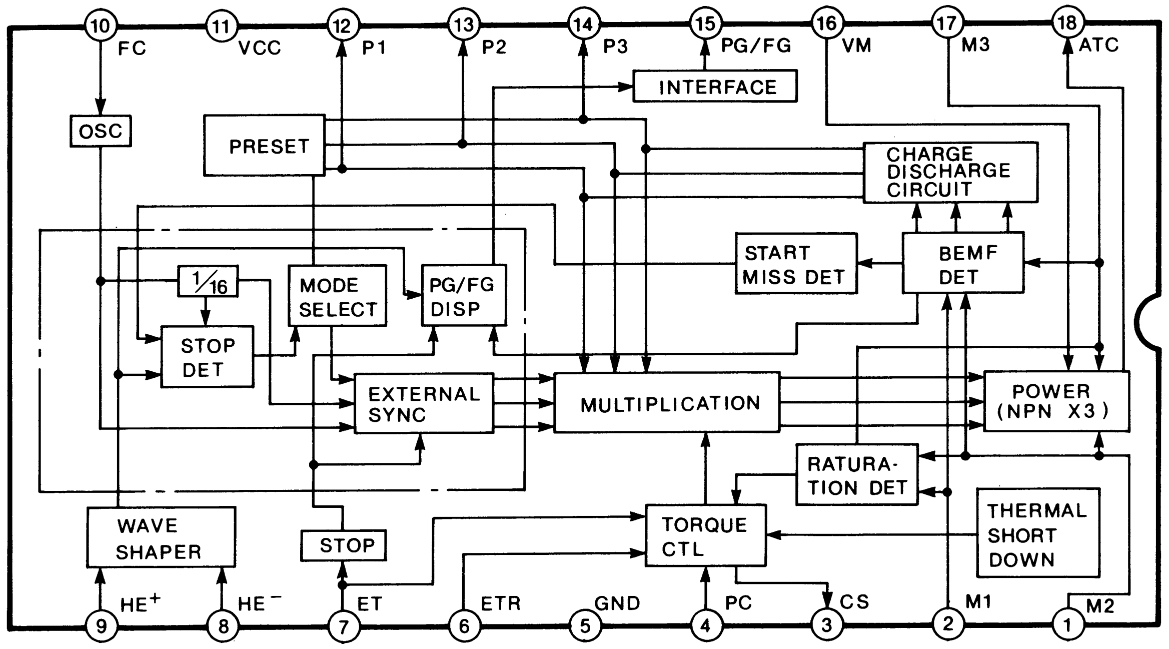
CYLINDER DRIVE C.B.A. (VEP00Q74A)



D
C
B
A
1
2
3
4
HE+
VH
HE−
VM
R1
C3
C2
C1
C13
C11
C12
GND
M2
M3
M1
C4
C5
C6
C8
C7
IC1
C10
C9
TH1
P2
P1
REF. NO. 2900 SERIES

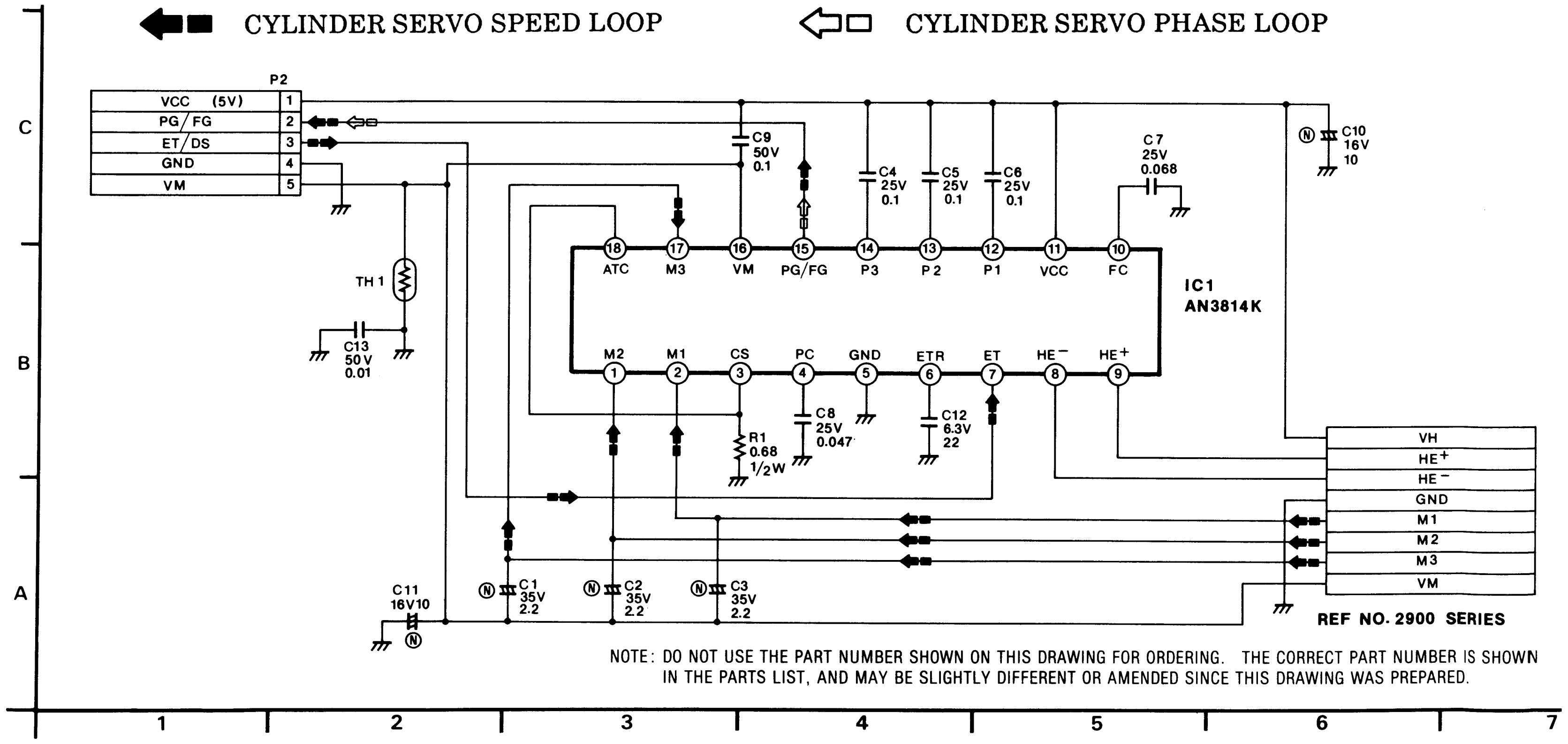
CYLINDER DRIVE SCHEMATIC DIAGRAM

IC1 AN3814K



10 FC
11 VCC
12 P1
13 P2
14 P3
15 PG/FG
16 VM
17 M3
18 ATC
INTERFACE
OSC
PRESET
CHARGE DISCHARGE CIRCUIT
1/16
MODE SELECT
PG/FG DISP
START MISS DET
BEMF DET
STOP DET
EXTERNAL SYNC
MULTIPLICATION
POWER (NPN X3)
RATURA-TION DET
THERMAL SHORT DOWN
WAVE SHAPER
STOP
TORQUE CTL
9 HE+
8 HE−
7 ET
6 ETR
5 GND
4 PC
3 CS
2 M1
1 M2

◀■ CYLINDER SERVO SPEED LOOP ⇦□ CYLINDER SERVO PHASE LOOP



P2
VCC (5V) 1
PG/FG 2
ET/DS 3
GND 4
VM 5
C9 50V 0.1
C4 25V 0.1
C5 25V 0.1
C6 25V 0.1
C7 25V 0.068
C10 16V 10
TH 1
C13 50V 0.01
IC1 AN3814K
ATC M3 VM PG/FG P3 P2 P1 VCC FC
M2 M1 CS PC GND ETR ET HE− HE+
R1 0.68 1/2W
C8 25V 0.047
C12 6.3V 22
C11 16V10
C1 35V 2.2
C2 35V 2.2
C3 35V 2.2
VH
HE+
HE−
GND
M1
M2
M3
VM
REF NO. 2900 SERIES
C
B
A
1
2
3
4
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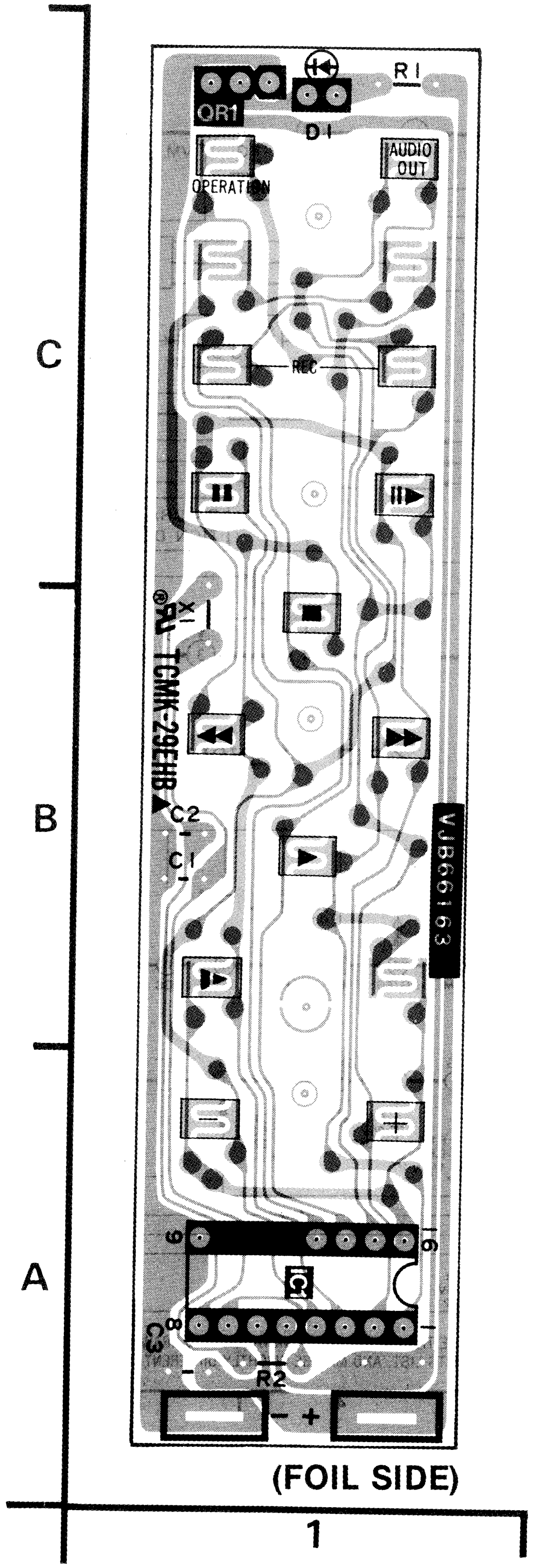
6
7

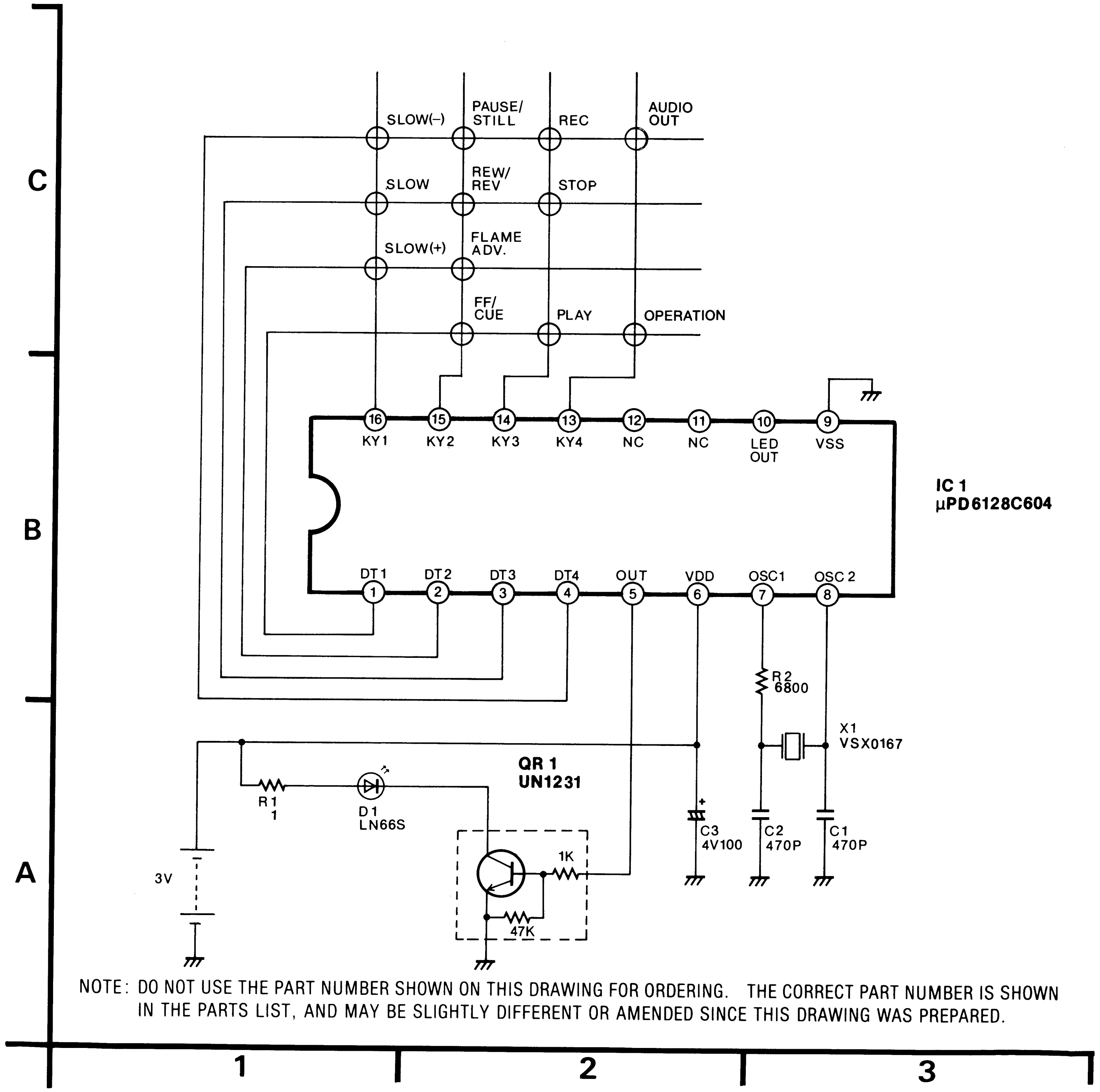
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

REMOTE CONTROLLER C.B.A. (VEP66163A)


QR1
D1
R1
OPERATION
AUDIO OUT
REC
X1
TCMK-29EHB
C2
C1
VJB66163
IC
9
16
8
1
C3
R2
-
+
C
B
A
1

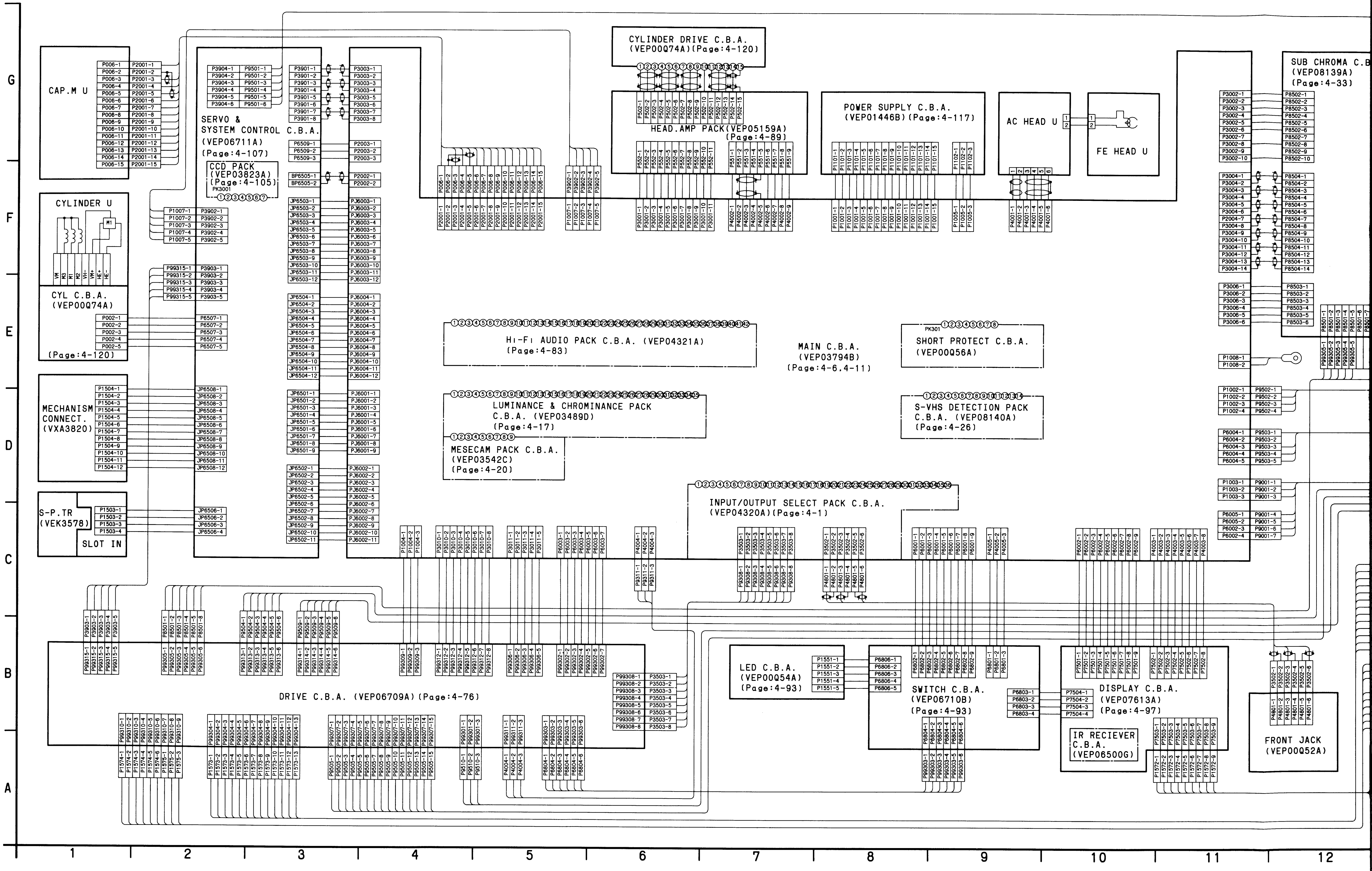
(FOIL SIDE)

REMOTE CONTROLLER SCHEMATIC DIAGRAM


SLOW(-)
PAUSE/ STILL
REC
AUDIO OUT
SLOW
REW/ REV
STOP
SLOW(+)
FLAME ADV.
FF/ CUE
PLAY
OPERATION
16 KY1
15 KY2
14 KY3
13 KY4
12 NC
11 NC
10 LED OUT
9 VSS
IC 1
μPD6128C604
DT1 1
DT2 2
DT3 3
DT4 4
OUT 5
VDD 6
OSC1 7
OSC 2 8
R2 6800
X1 VSX0167
QR 1 UN1231
R1 1
D1 LN66S
1K
47K
3V
C3 4V100
C2 470P
C1 470P
C
B
A
1
2
3

NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

INTERCONNECTION SCHEMATIC DIAGRAM


CAP.M U
CYLINDER U
CYL C.B.A.
(VEP00Q74A)
(Page:4-120)
MECHANISM CONNECT.
(VXA3820)
S-P.TR
(VEK3578)
SLOT IN
SERVO & SYSTEM CONTROL C.B.A.
(VEP06711A)
(Page:4-107)
CCD PACK
(VEP03823A)
(Page:4-105)
PK3001
CYLINDER DRIVE C.B.A.
(VEP00Q74A)(Page:4-120)
HEAD.AMP PACK(VEP05159A)
(Page:4-89)
POWER SUPPLY C.B.A.
(VEP01446B)(Page:4-117)
AC HEAD U
FE HEAD U
SUB CHROMA C.B
(VEP08139A)
(Page:4-33)
HI-FI AUDIO PACK C.B.A. (VEP04321A)
(Page:4-83)
MAIN C.B.A.
(VEP03794B)
(Page:4-6,4-11)
PK301
SHORT PROTECT C.B.A.
(VEP00Q56A)
LUMINANCE & CHROMINANCE PACK
C.B.A. (VEP03489D)
(Page:4-17)
S-VHS DETECTION PACK
C.B.A. (VEP08140A)
(Page:4-26)
MESECAM PACK C.B.A.
(VEP03542C)
(Page:4-20)
INPUT/OUTPUT SELECT PACK C.B.A.
(VEP04320A)(Page:4-1)
DRIVE C.B.A. (VEP06709A)(Page:4-76)
LED C.B.A.
(VEP00Q54A)
(Page:4-93)
SWITCH C.B.A.
(VEP06710B)
(Page:4-93)
DISPLAY C.B.A.
(VEP07613A)
(Page:4-97)
IR RECIEVER
C.B.A.
(VEP06500G)
FRONT JACK
(VEP00Q52A)
G
F
E
D
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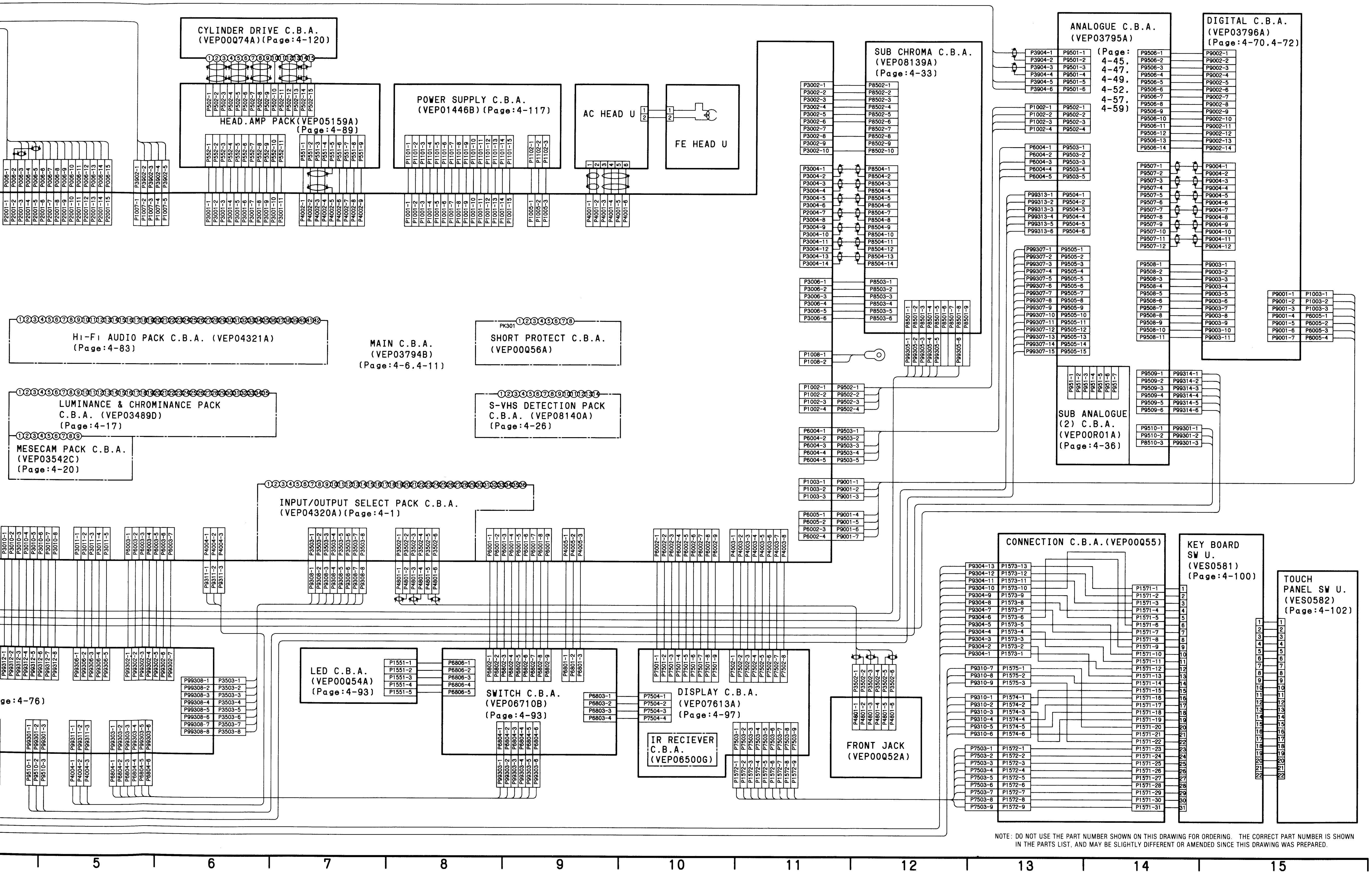
12

AM


CYLINDER DRIVE C.B.A. (VEP00Q74A)(Page:4-120)
HEAD.AMP PACK(VEP05159A) (Page:4-89)
POWER SUPPLY C.B.A. (VEP01446B)(Page:4-117)
AC HEAD U
FE HEAD U
SUB CHROMA C.B.A. (VEP08139A) (Page:4-33)
ANALOGUE C.B.A. (VEP03795A) (Page: 4-45, 4-47, 4-49, 4-52, 4-57, 4-59)
DIGITAL C.B.A. (VEP03796A) (Page:4-70,4-72)
Hi-Fi AUDIO PACK C.B.A. (VEP04321A) (Page:4-83)
MAIN C.B.A. (VEP03794B) (Page:4-6,4-11)
PK301
SHORT PROTECT C.B.A. (VEP00Q56A)
LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03489D) (Page:4-17)
S-VHS DETECTION PACK C.B.A. (VEP08140A) (Page:4-26)
MESECAM PACK C.B.A. (VEP03542C) (Page:4-20)
SUB ANALOGUE (2) C.B.A. (VEP00R01A) (Page:4-36)
INPUT/OUTPUT SELECT PACK C.B.A. (VEP04320A)(Page:4-1)
CONNECTION C.B.A.(VEP00Q55)
KEY BOARD SW U. (VES0581) (Page:4-100)
TOUCH PANEL SW U. (VES0582) (Page:4-102)
LED C.B.A. (VEP00Q54A) (Page:4-93)
SWITCH C.B.A. (VEP06710B) (Page:4-93)
DISPLAY C.B.A. (VEP07613A) (Page:4-97)
IR RECIEVER C.B.A. (VEP06500G)
FRONT JACK (VEP00Q52A)
ge:4-76)
5
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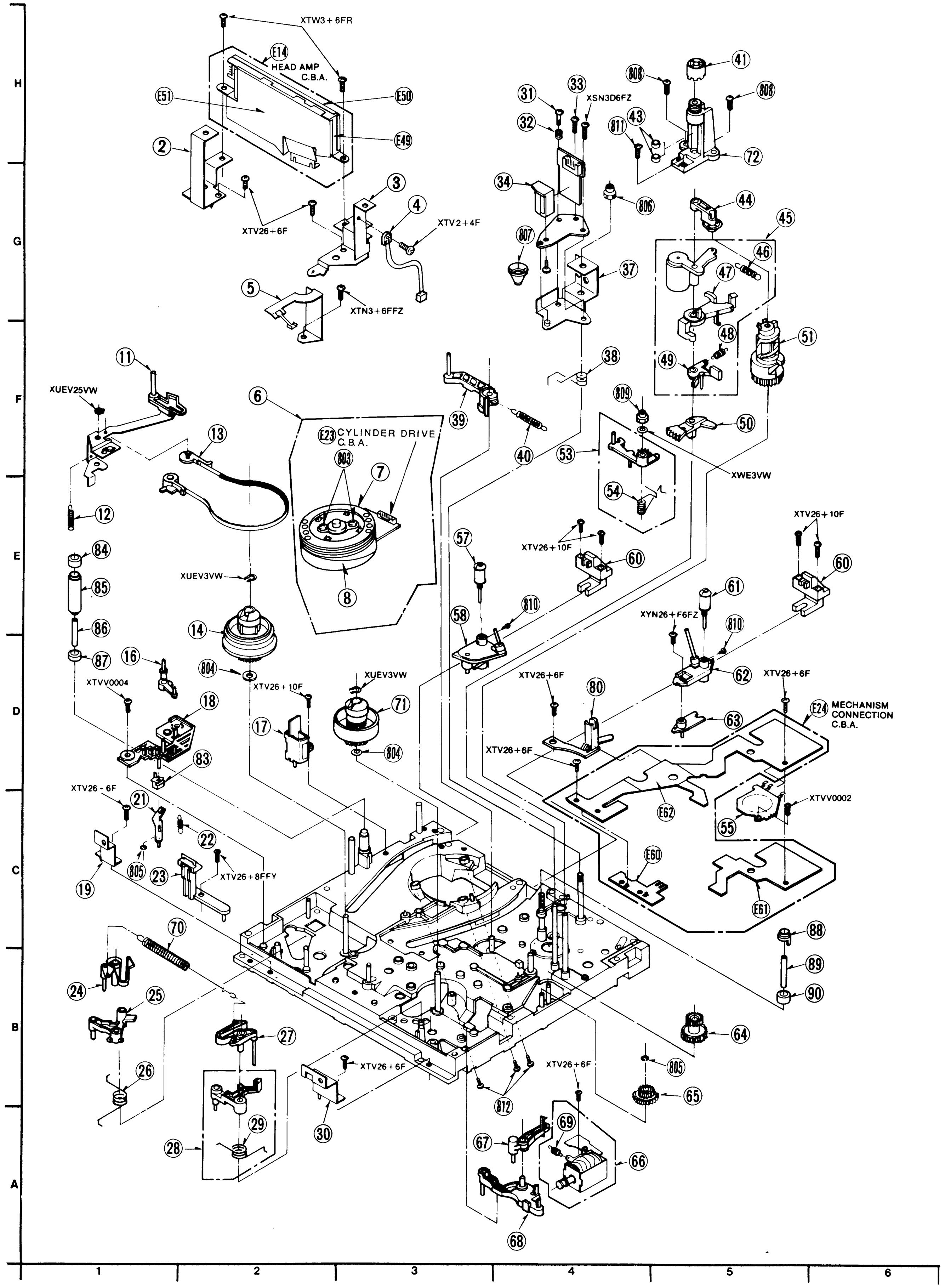
NOTE: DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

EXPLODED VIEWS

❶ *Chassis Parts Section*


XTW3+6FR
E14 HEAD AMP C.B.A.
E51
E50
E49
2
3
4
XTV2+4F
XTV26+6F
5
XTN3+6FFZ
31
32
33
XSN3D6FZ
808
41
808
811
43
72
34
806
807
37
44
45
46
47
48
49
51
38
11
XUEV25VW
6
E23 CYLINDER DRIVE C.B.A.
803
7
13
39
40
809
50
53
XWE3VW
54
12
8
84
85
XUEV3VW
57
XTV26+10F
60
XTV26+10F
60
14
86
87
16
804
XTV26+10F
61
810
XYN26+F6FZ
810
58
XUEV3VW
71
62
XTV26+6F
XTVV0004
18
17
XTV26+6F
80
E24 MECHANISM CONNECTION C.B.A.
63
804
83
XTV26+6F
E62
55
XTVV0002
XTV26-6F
21
22
805
23
XTV26+8FFY
19
E60
E61
88
89
90
70
24
25
27
64
26
XTV26+6F
30
812
805
XTV26+6F
65
28
29
69
67
66
68
H
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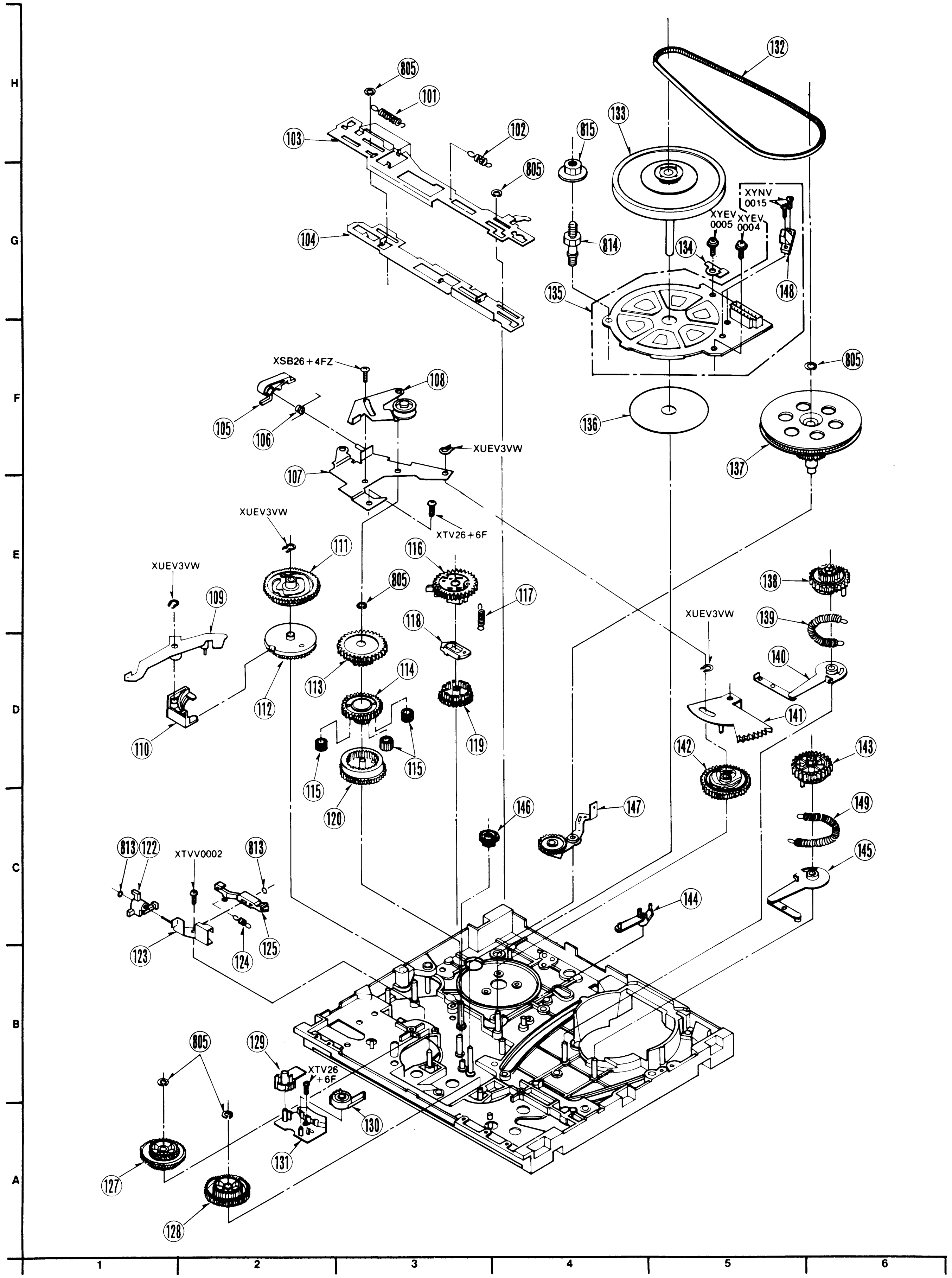
❷ *Moving Mechanism Section*


805
101
103
102
805
104
132
133
815
814
XYNV 0015
XYEV 0005
XYEV 0004
134
135
148
805
XSB26+4FZ
108
105
106
XUEV3VW
107
136
137
XTV26+6F
XUEV3VW
111
116
XUEV3VW
109
805
117
138
139
118
XUEV3VW
140
113
114
112
119
141
110
115
115
142
143
120
146
147
149
813
122
XTVV0002
813
145
123
124
125
144
805
129
XTV26 +6F
130
131
127
128
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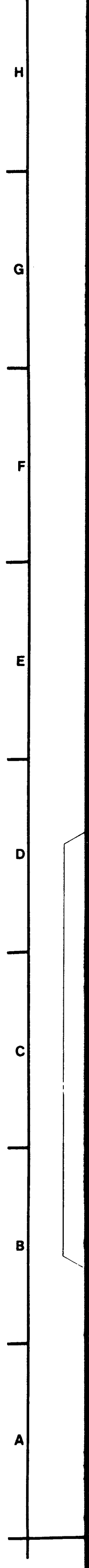
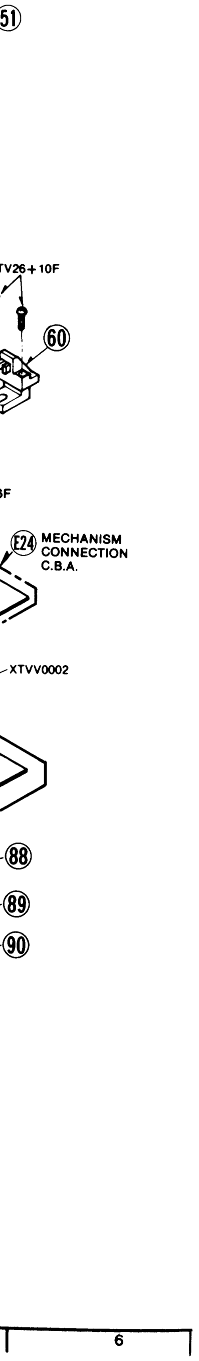
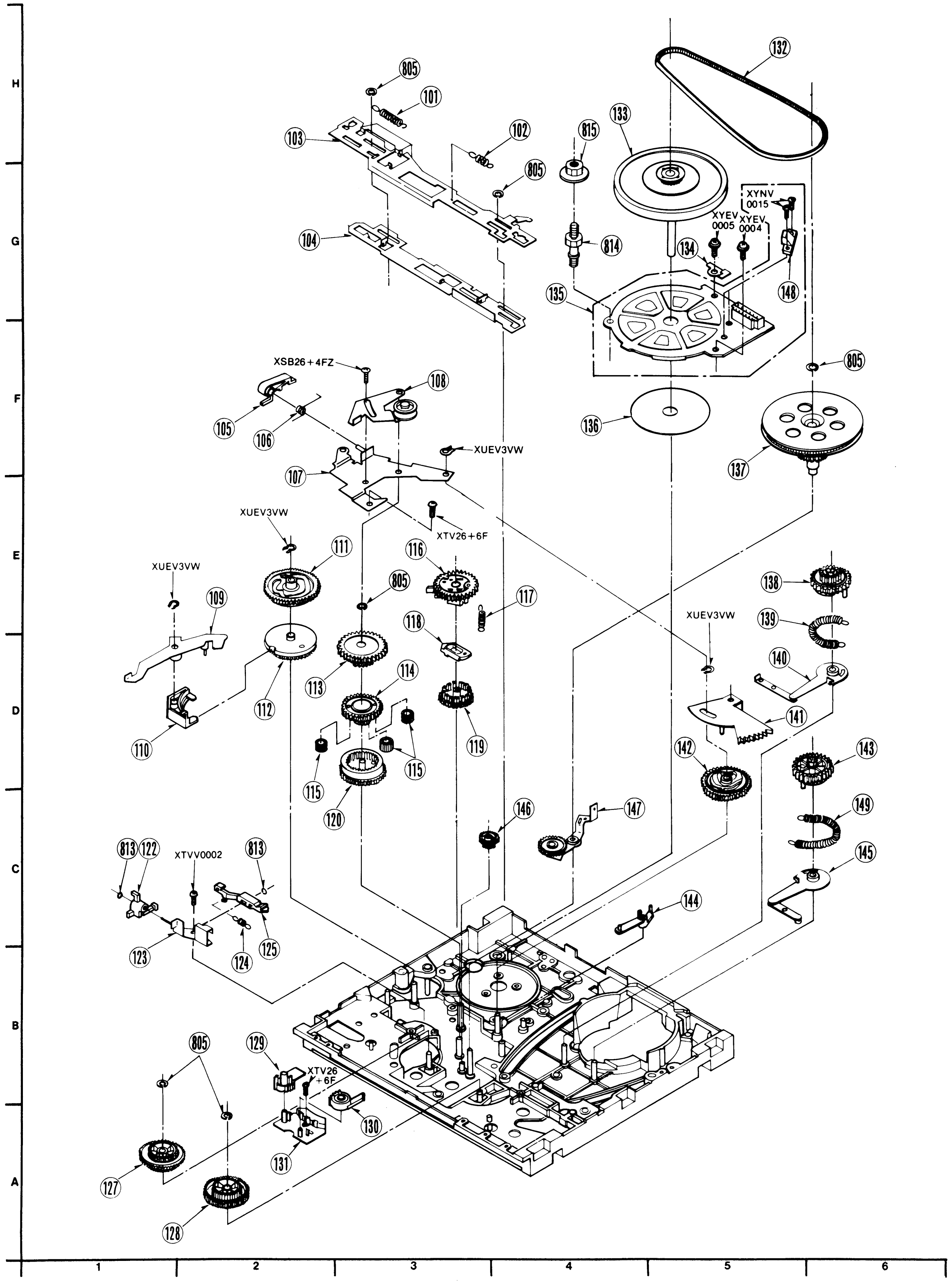
❸ C





(51)
TV26+10F
(60)
F
E24 MECHANISM CONNECTION C.B.A.
XTVV0002
(88)
(89)
(90)
6

❷ Moving Mechanism Section



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814
133
132
XYNV 0015
XYEV 0005
XYEV 0004
134
148
135
805
XSB26+4FZ
108
105
106
XUEV3VW
107
136
137
XUEV3VW
XTV26+6F
111
116
805
117
XUEV3VW
109
118
138
139
XUEV3VW
140
113
114
112
110
119
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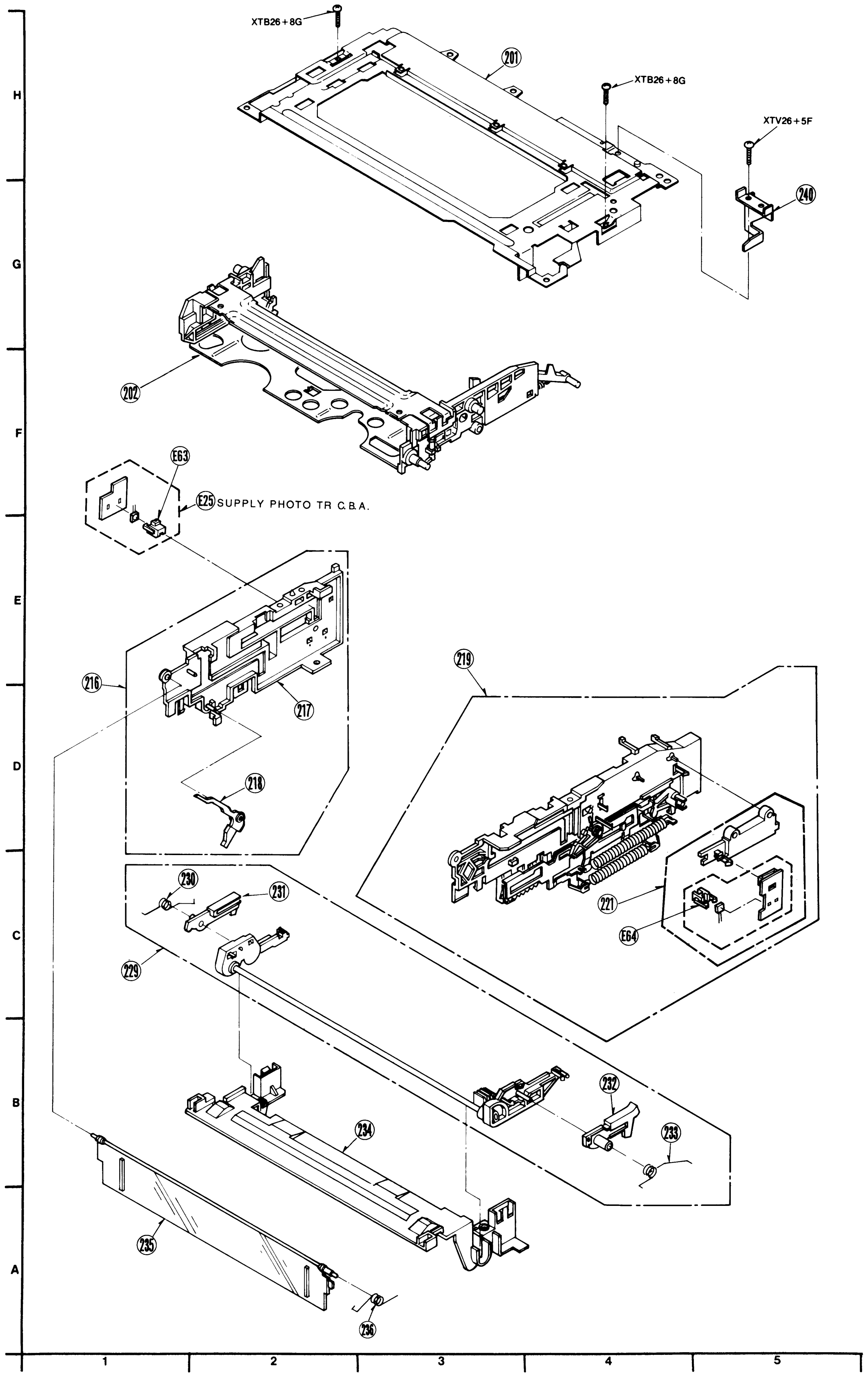
115
115
142
143
120
149
146
147
145
813
122
XTVV0002
813
144
123
124
125
805
129
XTV26 +6F
130
131
127
128

❸ Cassette Compartment Section



H
G
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C
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A
1
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3
4
5
XTB26+8G
201
XTB26+8G
XTV26+5F
240
202
E63
E25 SUPPLY PHOTO TR C.B.A.
216
217
218
219
221
E64
230
231
229
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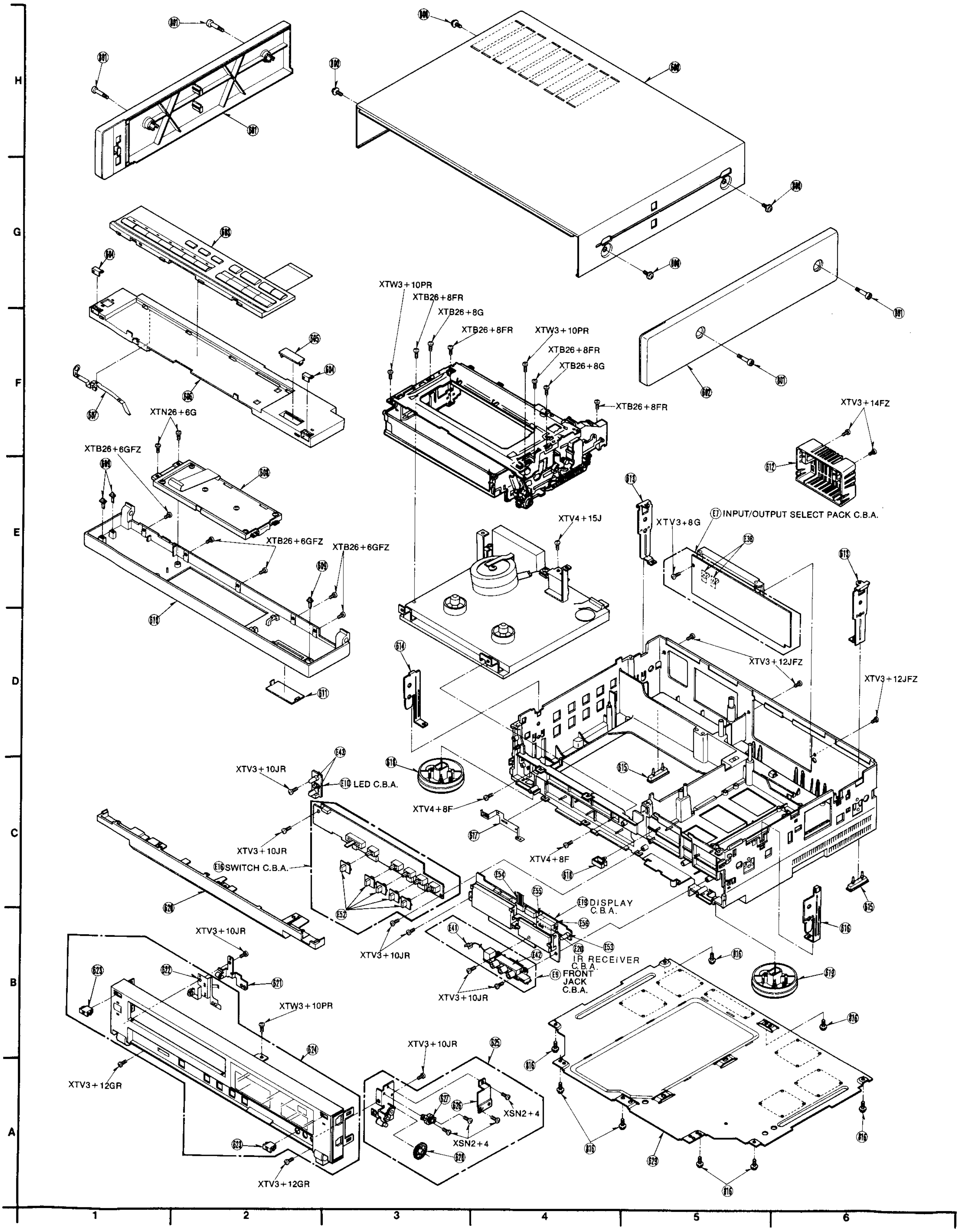
235
236

❹ *Casing Parts Section*


H
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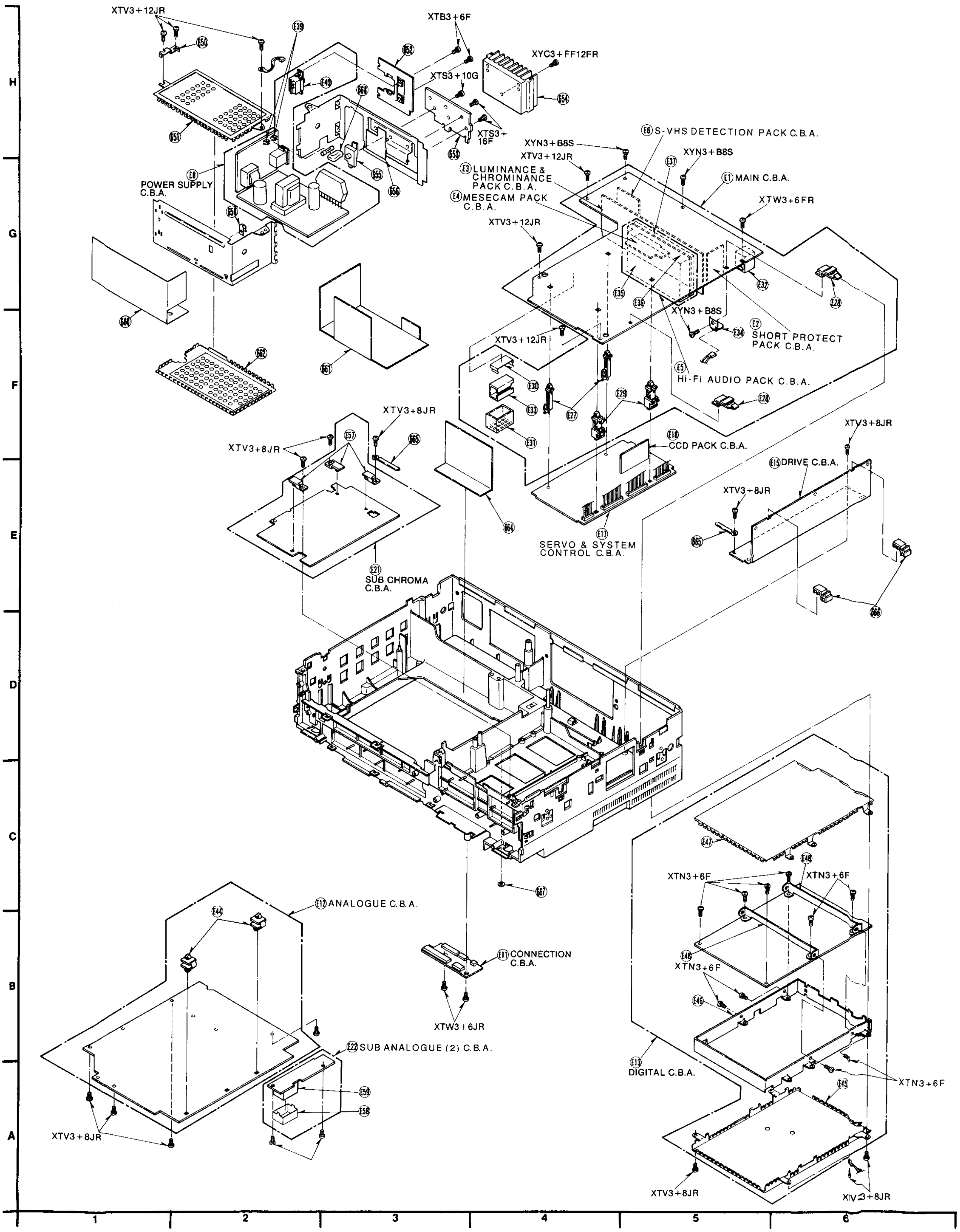
XTW3+10PR
XTB26+8FR
XTB26+8G
XTB26+8FR
XTW3+10PR
XTB26+8FR
XTB26+8G
XTB26+8FR
XTN26+6G
XTB26+6GFZ
XTB26+6GFZ
XTB26+6GFZ
XTV3+14FZ
XTV4+15J
XTV3+8G
E7 INPUT/OUTPUT SELECT PACK C.B.A.
E36
XTV3+12JFZ
XTV3+12JFZ
XTV3+10JR
E43
E10 LED C.B.A.
XTV4+8F
XTV3+10JR
E16 SWITCH C.B.A.
E52
XTV4+8F
E54
E55
E19 DISPLAY C.B.A.
E56
E53
E20 IR RECEIVER C.B.A.
E41
E42
E9 FRONT JACK C.B.A.
XTV3+10JR
XTV3+10JR
XTV3+10JR
XTW3+10PR
XTV3+12GR
XTV3+10JR
XSN2+4
XSN2+4
XTV3+12GR

❺ *Circuit Board Assembly Part Section*


XTV3+12JR
650
E39
XTB3+6F
652
XYC3+FF12FR
E40
668
XTS3+10G
654
651
XTS3+16F
653
655
656
E8
POWER SUPPLY C.B.A.
650
E6 S-VHS DETECTION PACK C.B.A.
XYN3+B8S
XTV3+12JR
E37
XYN3+B8S
E3 LUMINANCE & CHROMINANCE PACK C.B.A.
E1 MAIN C.B.A.
E4 MESECAM PACK C.B.A.
XTW3+6FR
XTV3+12JR
660
E35
E36
E32
E28
XYN3+B8S
E34
E2 SHORT PROTECT PACK C.B.A.
661
662
XTV3+12JR
E30
E5 Hi-Fi AUDIO PACK C.B.A.
E33
E27
E29
E28
E31
XTV3+8JR
E57
665
XTV3+8JR
E18 CCD PACK C.B.A.
XTV3+8JR
E15 DRIVE C.B.A.
XTV3+8JR
664
E17
SERVO & SYSTEM CONTROL C.B.A.
665
E21
SUB CHROMA C.B.A.
666
E47
E48
XTN3+6F
XTN3+6F
667
E12 ANALOGUE C.B.A.
E44
E11 CONNECTION C.B.A.
E48
XTN3+6F
E46
XTW3+6JR
E22 SUB ANALOGUE (2) C.B.A.
E13
DIGITAL C.B.A.
XTN3+6F
E45
E59
E58
XTV3+8JR
XTV3+8JR
XTV3+8JR
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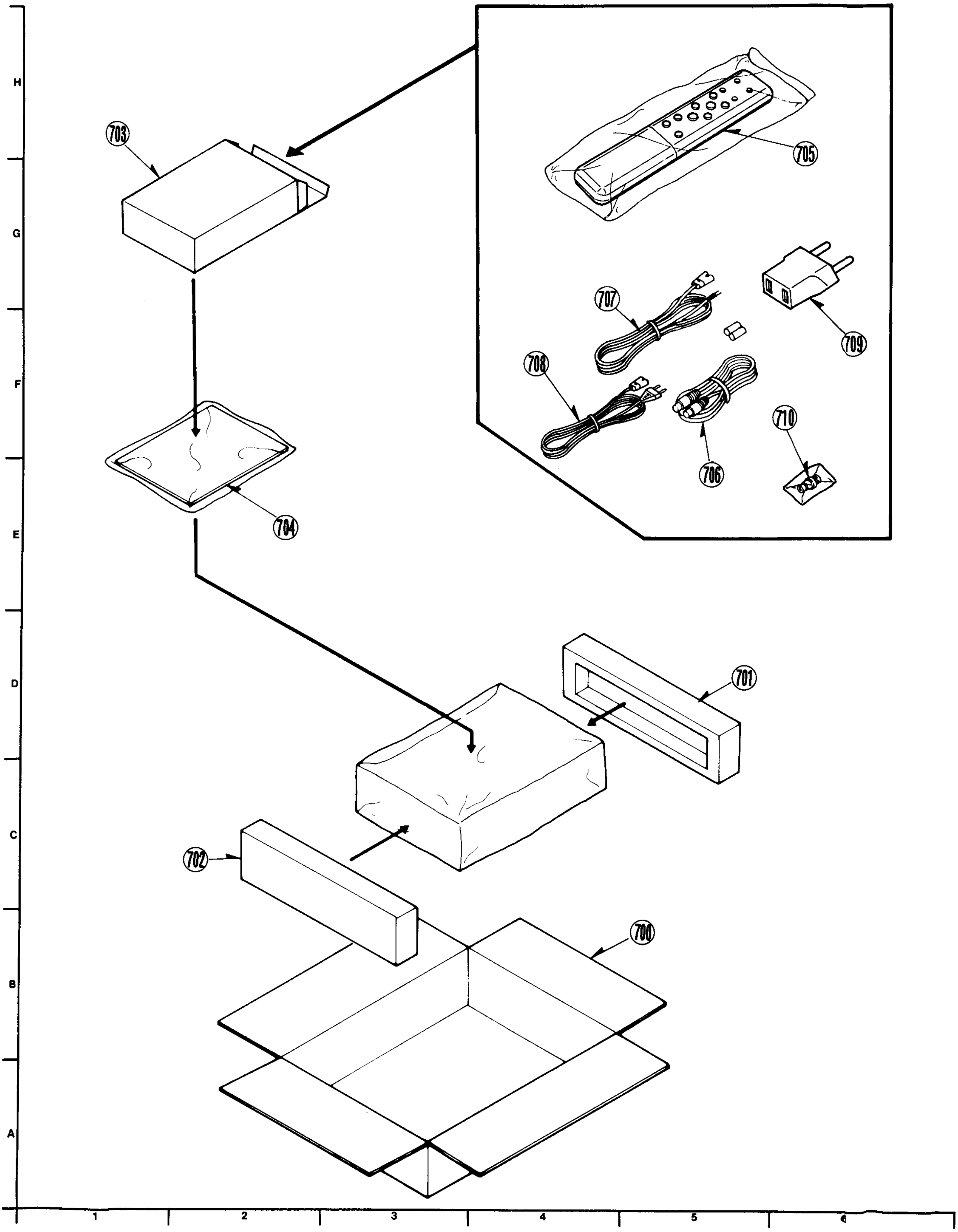
❻ Packing Part & Accessories Section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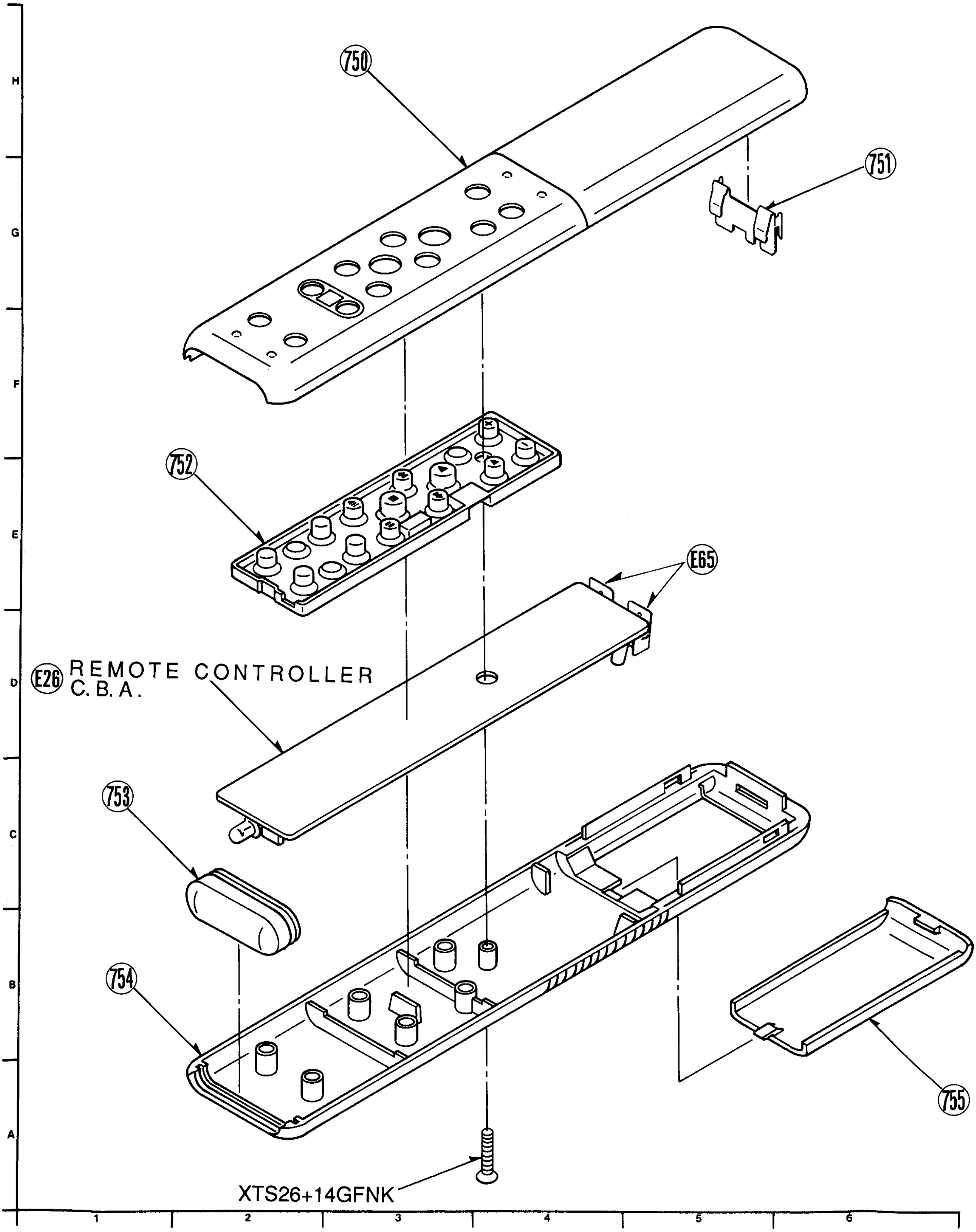
700

❼ *Remote Control Unit Section*


H
G
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D
C
B
A
750
751
752
E65
E26 REMOTE CONTROLLER C. B. A.
753
754
755
XTS26+14GFNK
1
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6

MECHANICAL REPLACEMENT PARTS LIST

Note: 1. * Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
2(1)		VMA6897	HEAD AMP MOUNT ANGLE (L)	1	
3(1)		VMA6898	HEAD AMP MOUNT ANGLE (R)	1	
4(1)		VEK3185	DEW DETECTOR UNIT	1	
5(1)		VXA2702	EARTH PLATE UNIT	1	
6(1)		VEG0848	CYLINDER UNIT	1	<!>
7(1)		VEH0499	UPPER CYLINDER UNIT	1	<!>
11(1)		VXL1495	TENSION ARM (1) UNIT	1	
12(1)		VMB1563	TENSION SPRING	1	
13(1)		VXZ0267	TENSION BAND UNIT	1	
14(1)		VXR0185	SUPPLY REEL TABLE UNIT	1	
16(1)		VXL1496	TENSION RELEASE ARM(A)UNIT	1	
17(1)		VBS0038	FE HEAD	1	
18(1)		VXA2705	TENSION ARM BASE (1) UNIT	1	
19(1)		VMA6895	MOUNT ANGLE (L)	1	
21(1)		VXL1497	TENSION RELEASE ARM(B)UNIT	1	
22(1)		VMB1582	TENSION RELEASE SPRING	1	
23(1)		VES0489	SAFETY SW	1	
24(1)		VXZ0259	SUPPLY MAIN BRAKE UNIT	1	
25(1)		VXZ0274	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)		VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)		VXZ0262	TAKE UP MAIN BRAKE UNIT	1	
28(1)		VXZ0221	TAKE UP SOFT BRAKE UNIT	1	
29(1)		VMB1561	TAKE UP SOFT BRAKE SPRING	1	
30(1)		VMA6896	MOUNT ANGLE (R)	1	
31(1)		VHD0322	ADJUST SCREW	1	
32(1)		VMB1251	ADJUST SPRING	1	
33(1)		VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)		VBR0173	A/C HEAD	1	
37(1)		VMA7831	HEAD BASE	1	
38(1)		VMB1567	A/C HEAD SPRING	1	
39(1)		VXL1857	SUB LOADING ARM (1) UNIT	1	
40(1)		VMB1566	SUB POST SPRING	1	
41(1)		VXQ0006	THRUST SCREW UNIT	1	
43(1)		VMX1033	OIL SEAL	2	
44(1)		VMX1353	PINCH CAM CAP	1	
45(1)		VXL1858	PRESSURE ROLLER UNIT	1	
46(1)		VMB1941	PIN PRESSURE SPRING	1	
47(1)		VML2232	PINCH PRESSURE ARM	1	
48(1)		VMB1569	PINCH PRESSURE ARM RELEASE	1	
			SPRING		
49(1)		VML1874	PINCH LIFT ARM	1	
50(1)		VDG0597	P5 PULL OUT SECTOR GEAR	1	
51(1)		VDG0421	PINCH CAM	1	
53(1)		VXL2027	P5 UNIT	1	
54(1)		VMB2718	P5 SPRING	1	
55(1)		VSS0175	MODE SW	1	
57(1)		VXP0863	ROLLER POST UNIT	1	
58(1)		VXA4106	INCLIND BASE (S)(1)UNIT	1	
60(1)		VMD0910	POST STOPPER	2	
61(1)		VXP0764A	ROLLER POST UNIT	1	
62(1)		VXA3876	INCLIND BASE(T)(1)UNIT	1	
63(1)		VXA2687	INCLIND ADJUST PLATE UNIT	1	
64(1)		VDG0483	PINCH SPEED DOWN GEAR	1	
65(1)		VDG0332	CONNECTION GEAR	1	
66(1)		VXA3735	SOLENOID UNIT	1	
67(1)		VXA2692	KICK ROD UNIT	1	
68(1)		VML1849	SOLENOID LEVER (1) UNIT	1	
69(1)		VMB1553	KICK ROD SPRING	1	
70(1)		VMB1958	MAIN BRAKE SPRING	1	
71(1)		VXR0188	TAKE UP REEL TABLE UNIT	1	
72(1)		VXD0101	HOUSING UNIT	1	
80(1)		VXA3520	LED HOLDER UNIT	1	
83(1)		VMB1733	LEAF SPRING	1	
84(1)		VMX1088	SUPPLY UPPER LIMITER	1	
85(1)		VDP1072	SUPPLY ROLLER	1	
86(1)		VMX1581	P1 COLLAR	1	
87(1)		VMX1533	SUPPLY ROLLER LIMITER	1	
88(1)		VMX1544	P4 UPPER LIMITER	1	
89(1)		VMX1568	P4 SLEEVE	1	
90(1)		VMX1534	P4 LOWER LIMITER	1	

Ref.No.		Part No.	Part·Name & Description	Pcs	Remarks
101(2)		VMB1583	TAKE UP SOFT BRAKE RELEASE	1	
			ARM SPRING		
102(2)		VMB1560	MAIN LEVER SPRING	1	
103(2)		VXA3509	MAIN LEVER (1) UNIT	1	
104(2)		VMM0215	SUB LEVER	1	
105(2)		VXL2088	SS BRAKE ARM UNIT	1	
106(2)		VMB1588	SS BRAKE SPRING	1	
107(2)		VXA3512	SS BRAKE BASE (1) UNIT	1	
108(2)		VXA3516	TENSION ROLLER UNIT	1	
109(2)		VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)		VML1861	DETENT ARM	1	
111(2)		VDG0574	MAIN CAM GEAR	1	
112(2)		VDG0343	SUB CAM GEAR	1	
113(2)		VDG0348	CENTRE GEAR	1	
114(2)		VDG0422	RETAINER GEAR	1	
115(2)		VDG0345	PLANET GEAR	3	
116(2)		VDG0547	CLUTCH DISK	1	
117(2)		VMB1558	CLUTCH SPRING	1	
118(2)		VDG0350	LOCK SLIDE GEAR	1	
119(2)		VDG0335	DRIVE DISK	1	
120(2)		VDG0342	RING GEAR	1	
122(2)		VML1859	CHANGE LEVER	1	
123(2)		VXA2672	RELEASE LEVER (1) UNIT	1	
124(2)		VMB1557	RELEASE SPRING	1	
125(2)		VML1860	RELEASE LEVER	1	
127(2)		VXP1002	TAKE UP REEL GEAR UNIT	1	
128(2)		VDG0445	SUPPLY REEL GEAR	1	
129(2)		VML1858	RETURN LEVER (R)	1	
130(2)		VML1857	RETURN LEVER (L)	1	
131(2)		VMD0913	STOPPER BASE	1	
132(2)		VDV0169	TIMING BELT	1	
133(2)		VXP1113	ROTOR UNIT	1	
134(2)		VMA7941	ROTOR STOPPER	1	
135(2)		VEK4105	STATOR UNIT	1	<!>
136(2)		VMA6847	SUB PLATE	1	
137(2)		VXP0917	CENTRE PULLEY UNIT	1	
138(2)		VDG0564	LOADING GEAR (T)	1	
139(2)		VMB1555	LOADING SPRING (T)	1	
140(2)		VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)		VXA3515	SECTOR GEAR UNIT	1	
142(2)		VDG0448	LOADING CAM GEAR	1	
143(2)		VDG0419	LOADING GEAR (S)	1	
144(2)		VML1855	PLAY CONTROL ARM	1	
145(2)		VXL1487	LOADING ARM (S)(1) UNIT	1	
146(2)		VDG0546	INTERMEDIATE GEAR	1	
147(2)		VXL1861	PLAY ARM UNIT	1	
148(2)		VBK0048	FG HEAD	1	
149(2)		VMB1746	LOADING SPRING(S)	1	
201(3)		VMA7223	TOP PLATE	1	
202(3)		VXA4325	CASSETTE HOLDER UNIT	1	
216(3)		VXA4357	SIDE PLATE (L) UNIT	1	
217(3)		VMD1726	SIDE PLATE (L)	1	
218(3)		VML1880	OPENER LEVER	1	
219(3)		VXA3895	SIDE PLATE (R) UNIT	1	
221(3)		VXA4642	SLIDE SW UNIT	1	
229(3)		VXP0987	MAIN SHAFT UNIT	1	
230(3)		VMB1836	SUB WIPER SPRING (L)	1	
231(3)		VML1878	SUB WIPER ARM (L)	1	
232(3)		VML1879	SUB WIPER ARM (R)	1	
233(3)		VMB1837	SUB WIPER SPRING (R)	1	
234(3)		VMA6900	CASSETTE GUIDE	1	
235(3)		VKF1212	BLINDER PANEL	1	
236(3)		VMB1258	BLINDER SPRING	1	
240(3)		VMA7224	CASSETTE HOLDER ANGLE	1	
600(4)		VYP3526	TOP PANEL UNIT	1	
601(4)		VYC0428	SIDE PANEL (L) UNIT	1	
602(4)		VYC0430	SIDE PANEL (R) UNIT	1	
603(4)		VES0581	KEY BOARD SW PANEL	1	
604(4)		VMP2928	MAGNET ANGLE	2	
605(4)		VKW1370	REMOTE CONTROL FILTER (B)	1	
606(4)		VGP2670	DOOR PANEL	1	
607(4)		VMC0648	DOOR EARTH SPRING	1	
608(4)		VES0582	TOUCH PANEL SW	1	
609(4)		VGL0474	PANEL LIGHT	3	
610(4)		VYF1603	FRONT DOOR (1) UNIT	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
611(4)		VKW1369	REMOTE CONTROL FILTER (A)	1	
612(4)		VKF1150	HEAT SINK COVER	1	
613(4)		VMP1495	TOP SUPPORT ANGLE (REAR)	2	
614(4)		VMP2879	TOP SUPPORT ANGLE	1	(FRONT-LEFT)
615(4)		VKA0026	RUBBER FOOT	2	
616(4)		VMP2880	TOP SUPPORT ANGLE	1	(FRONT-LIGHT)
617(4)		VMC0650	EARTH PLATE	1	
618(4)		VJF0126	CLAMPER	1	
619(4)		VKA0068	LEG	2	
620(4)		VGP2671	SUPPORT PANEL	1	
621(4)		VXA4265	ANGLE (L) UNIT	1	
622(4)		VMC0647	EARTH SPRING (A)	1	
623(4)		VGQ2356	MAGNET HOLDER	2	
624(4)		VYP3525	FRONT PANEL (1) UNIT	1	
625(4)		VXA4266	ANGLE (R) UNIT	1	
626(4)		VMP2878	GEAR COVER	1	
627(4)		VDG0288	DUMPER UNIT	1	
628(4)		VDG0734	INTERMEDIATE GEAR	1	
629(4)		VKU0272	BOTTOM PLATE	1	
650(5)		VMP2882	POWER EARTH PLATE	1	
651(5)		VSC2621	SHIELD CASE (TOP)	1	
652(5)		VMP3005	AC INLET ANGLE	1	
653(5)		VSC2960	HEAT SINK	1	
654(5)		VSC2623	POWER HEAT SINK	1	
655(5)		VGQ1615	TR HOLDER	1	
656(5)		VMZ1455	INSULATION SHEET	1	<!>
657(5)		VSC2961	SHIELD CASE (A)	1	
658(5)		VMC0357	TR SUPPORT SPRING	1	
659(5)		VSC2620	SHIELD CASE (B)	1	
660(5)		VMZ1544	BARRIER (A)	1	
661(5)		VMZ1728	BARRIER (B)	1	<!>
662(5)		VSC2622	SHIELD CASE (BOTTOM)	1	
664(5)		VMZ1729	SHIELD BARRIER	1	
665(5)		VJR3	CLAMPER	2	
666(5)		VGQ1362	HINGE	2	
667(5)		VMX1956	SPACE WASHER	1	
668(5)		VMZ0429	FUSE COVER	1	<!>
700(6)		VPG5811	PACKING	1	
701(6)		VPN2985	CUSHION (R)	1	
702(6)		VPN2986	CUSHION (L)	1	
703(6)		VPK1358	ACCESSORY BOX	1	
704(6)		VQT4020	OPERATING INSTRUCTIONS	1	<!>
			(ENGLISH,GERMAN,FRENCH,		
			SPANISH)		
704(6)		VQT4089	OPERATING INSTRUCTIONS	1	<!>
			(ARABIC,CHINESE)		
705(6)		VEQ1195	REMOTE CONTROLLER UNIT	1	
706(6)		VFA0228	A/V CORD	1	
707(6)		VJA0568	AC CORD	1	<!>
708(6)		VJA0449	AC CORD	1	<!>
709(6)		VJP2974	PLUG ADAPTOR	1	<!>
710(6)		VFA0097	PHONO/BNC ADAPTOR	1	
750(7)		VYK3406	TOP CASE UNIT	1	
751(7)		VJR0185	ELECTRODE (COMMON)	1	
752(7)		VSP0541	RUBBER CONTACT	1	
753(7)		VKW0682	IR WINDOW	1	
754(7)		VKM2477	BOTTOM CASE	1	
755(7)		VKF1680	BATTERY COVER	1	
800(4)		VHD0378	TOP PANEL SCREW	4	
801(4)		VHD0492	SIDE PANEL SCREW	4	
803(1)		VHD0553	UPPER SYLINDER SCREW	2	
804(1)		VMX1171	REEL WASHER (0.5mm)	2	
804(1)		VMX1239	REEL WASHER (0.3mm)	2	
804(1)		VMX1238	REEL WASHER (0.2mm)	2	
805(1,2)		VMX1079	CUT WASHER	8	
806(1)		VHN0063	M4 NYLON NUT	1	
807(1)		VHN0110	ADJUST NUT	1	
808(1)		VHD0317	HOUSING SCREW	2	
809(1)		VHD0045	M3 NYLON NUT	1	
810(1)		VHD0133	ROLLER POST SCREW	2	
811(1)		VHD0374	HOUSING SCREW	1	
812(1)		VHD0342	CYLINDER SCREW	3	
813(2)		VMX0967	CUT WASHER	2	
814(2)		VHD0431	STATOR SPACER SCREW	1	
815(2)		VHN0102	STATOR NUT	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
816(4)		VHD0059	BOTTOM PLATE SCREW	8	
			TOOLS & FIXTURES		
		VFM8080HQFP	NTSC ALIGNMENT TAPE	1	
		VFM8180HADH	PAL ALIGNMENT TAPE	1	OR VFJ8125H3F
		VFK0191	POST ADJUSTMENT PLATE	1	OR VFKS0010
		VFK0387	TENSION POST ADJ. PLATE	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	OR VFKS0009
		VFK0132	BACK TENSION METER	1	
		VFK0335	RETAINING RING REMOVER	1	
		VFK0328	H-POSI. ADJ. SCREW DRIVER	1	OR VFKS0003
		VFK0329	POST ADJ. SCREW DRIVER	1	
		VFK0269	L-TYPE SCREW DRIVER	1	
		VFK0326	HEX. WRENCH SET	1	
		VFK0343	CHECK LIGHT	1	
		VFK66	FAN TYPE TENSION GAUGE	1	
		VFK0344	POST HEIGHT ADJ. FIXTURE	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0681	18PIN EXTENSION CABLE	2	

ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICROFARADS(uf),P=uuF.
4.The P.C.Board units marked width'■'show below the main assembled parts.
5.Printed circuit board assembly with mark(NLA) is no longer available after discontinuation of the product.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
E1		VEP03794B	MAIN C.B.A.	1	(NLA) INCLUDING THE SHORT PROTECT PACK C.B.A. (VEP00Q56A), LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03489D), Hi-Fi AUDIO PACK C.B.A. (VEP04321A), MESECAM PACK C.B.A. (VEP03452C), S-VHS DETECTION PACK C.B.A. (VEP08140A),
E2		VEP00Q56A	SHORT PROTECT PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A. (VEP03794B)
E3		VEP03489D	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A. (VEP03794B). INCLUDING THE SECAM PACK C.B.A. (VEP03452C).
E4		VEP03452C	MESECAM PACK C.B.A.	1	(NLA) INCLUDED IN LUMINANCE & CHROMINANCE C.B.A. (VEP003489)
E5		VEP04321A	Hi-Fi AUDIO PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A. (VEP03794B)
E6		VEP08140A	S-VHS DETECTION PACK C.B.A.	1	(NLA) INCLUDED IN MAIN C.B.A. (VEP03794B)
E7		VEP04320A	INPUT/OUTPUT SELECT PACK C.B.A.	1	(NLA)
E8		VEP01446B	POWER SUPPLY C.B.A.	1	(NLA)
E9		VEP00Q52A	FRONT JACK C.B.A.	1	(NLA)
E10		VEP00Q54A	LED C.B.A.	1	(NLA)
E11		VEP00Q55A	CONNECTION C.B.A.	1	(NLA)
E12		VEP03795A	ANALOGUE C.B.A.	1	(NLA)
E13		VEP03796A	DIGITAL C.B.A.	1	(NLA)
E14		VEP05159A	HEAD AMP C.B.A.	1	(NLA)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
E15		VEP06709A	DRIVE C.B.A.	1	(NLA)
E16		VEP06710B	SWITCH C.B.A.	1	(NLA)
E17		VEP06711A	SERVO & SYSTEM CONTROL C.B.A.	1	(NLA) INCLUDING THE CCD PACK C.B.A. (VEP03823A)
E18		VEP03823A	CCD PACK C.B.A.	1	(NLA) INCLUDED IN SERVO & SYSTEM CONTROL C.B.A. (VEP06711A)
E19		VEP07613A	DISPLAY C.B.A.	1	(NLA) INCLUDING THE IR RECEIVER C.B.A. (VEP66176A)
E20		VEP66176A	IR RECEIVER C.B.A.	1	(NLA) OR VEP06500G INCLUDED IN DISPLAY C.B.A. (VEP07613A)
E21		VEP08139A	SUB CHROMA C.B.A.	1	(NLA)
E22		VEP00R01A	SUB ANALOGUE (2) C.B.A.	1	(NLA)
E23		VEP00Q74A	CYLINDER DRIVE C.B.A.	1	(NLA)
E24		VXA3820	MECHANISM CONNECTION C.B.A.	1	(NLA)
E25		VEK3578	SUPPLY PHOTO TR. C.B.A.	1	(NLA)
E26		VEP66163A	REMOTE CONTOROLLER C.B.A.	1	(NLA)
	■	VEP03794B	MAIN C.B.A.		(NLA)
			CAPACITORS		
C301		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C302		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C303		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C304		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C305		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C306		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C307		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C308		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C309		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C310		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C311		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C312,13		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	2	
C314		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C315		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C316		ECQB1H562JH	P.CAPACITOR 50V 5600P	1	
C317		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C318		ECEA1EKN2R2	E.CAPACITOR 25V 2.2U	1	
C319		ECEA1EKA220	E.CAPACITOR 25V 22U	1	
C320		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C321		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C322		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C323		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C324		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C325		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C326		ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C327		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C328		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C329		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C330		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C331		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C332		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C333		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C334		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C335		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C336		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C337		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C338-40		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C341,42		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C343,44		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C345		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C346		ECCF1H331JC	C.CAPACITOR 50V 330P	1	
C801		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C802		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C803		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C804		ECEA1HFS4R7	E.CAPACITOR 50V 4.7U	1	
C805		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C806		ECEA0JU221	E.CAPACITOR 6.3V 220U	1	
C807		ECUM1H050CCN	C.CAPACITOR CH 50V 5P	1	
C808		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C809		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C811		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C812		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C813		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C814		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C815		ECUM1H681KBN	C.CAPACITOR CH 50V 680P	1	
C816		ECQV1H154JZ	P.CAPACITOR 50V 0.15U	1	
C817		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C818		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C819		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C822		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C823		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C824		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C851		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C852		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C853		ECEA10Z47	E.CAPACITOR 10V 47U	1	
C854		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C855		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C856		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C859		ECCF1H470JC	C.CAPACITOR 50V 47P	1	
C1001		ECEA1EK100	E.CAPACITOR 25V 10U	1	
C1002		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C1003		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1004		ECEA1CU331	E.CAPACITOR 16V 330U	1	
C1005,06		ECEA0JU331	E.CAPACITOR 6.3V 330U	2	
C1007		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C1008		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1009		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C1009		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C1010		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1011		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1012		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C1013		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1302		ECEA1HN2R2S	E.CAPACITOR 50V 2.2U	1	
C1303		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C1304		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C1305		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1306		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C2001		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2002-04		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2005-07		ECQB1H333JH	P.CAPACITOR 50V 0.033U	3	
C2008-10		ECQB1H332JH	P.CAPACITOR 50V 3300P	3	
C2011		ECEA1EU470	E.CAPACITOR 25V 47U	1	
C2012		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2013,14		ECQB1H223JH	P.CAPACITOR 50V 0.022U	2	
C2015		ECEA1CK470	E.CAPACITOR 16V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3001-03		ECEA1CK470	E.CAPACITOR 16V 47U	3	
C3004,05		ECEA0JU102	E.CAPACITOR 6.3V 1000U	2	
C3006		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3007		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C3008		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3009		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C3010		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3011		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3012		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3013		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3014		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C3015		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3016		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3017		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3018,19		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3020		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3021		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3022		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3024		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3028		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3035		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3037		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3038		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C3039		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3040		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3041		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3042		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3043		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C3044		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3045		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3047,48		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C3049		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3050		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C3701		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3702		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3703		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3704		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3705		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3706		ECEA1EU3R3	E.CAPACITOR 25V 3.3U	1	
C3707		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3708		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3709,10		ECUM1H681KBN	C.CAPACITOR CH 50V 680P	2	
C3711		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C3713		ECUM1H040CCN	C.CAPACITOR CH 50V 4P	1	
C3714		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3718		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3719		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3720		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3721		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3722		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3724		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4001		ECQP1332JZ	P.CAPACITOR 100V 3300P	1	
C4002		ECCD2H121J	C.CAPACITOR 500V 120P	1	
C4003		ECEA1CU330	E.CAPACITOR 16V 33U	1	
C4004		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4005		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4008		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4009		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4011		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4012		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C4013		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4014		ECQB1H822JH	P.CAPACITOR 50V 8200P	1	
C4015		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4016		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4017		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4018		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4020		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4021		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4022		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4023		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4024		ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C4025		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4026		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4027		ECQB1H822JH	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CM22	E.CAPACITOR 10V 22U	1	
C4029		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C4030		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA16M10R	E.CAPACITOR 16V 1U	1	
C4032		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4033		ECQB1H683JH	P.CAPACITOR 50V 0.068U	1	
C4101		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4102		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4103		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C4201,02		ECEA1APK101	E.CAPACITOR 10V 100U	2	
C4203,04		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C4205,06		ECEA1HPK010	E.CAPACITOR 50V 1U	2	
C4207		ECEA1APK470	E.CAPACITOR 10V 47U	1	
C4208		ECEA1CPK101	E.CAPACITOR 16V 100U	1	
C4210		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4212,13		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	2	
C4215		ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C4301		ECEA0JPK470	E.CAPACITOR 6.3V 47U	1	
C4302		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4501		ECEA1HBZ4R7	E.CAPACITOR 50V 4.7U	1	
C4503		ECQB1H102JA	P.CAPACITOR 50V 1000P	1	
C4504		ECQB1H223JA	P.CAPACITOR 50V 0.022U	1	
C4505		ECQB1H682JA	P.CAPACITOR 50V 6800P	1	
C4506		VCEA1EAE100	E.CAPACITOR 25V 10U	1	
C4507		ECQB1H223JA	P.CAPACITOR 50V 0.022U	1	
C4508		ECEA1EPH4R7	E.CAPACITOR 25V 4.7U	1	
C4509		VCEA1CAH470	E.CAPACITOR 16V 47U	1	
C4510		ECQB1H103JA	P.CAPACITOR 50V 0.01U	1	
C4511		ECQB1H332JA	P.CAPACITOR 50V 3300P	1	
C4512		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C4513,14		ECUM1H102JN	C.CAPACITOR CH 50V 1000P	2	
C4515		ECEA1HPZ4R7	E.CAPACITOR 50V 4.7U	1	
C4516		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4517		ECEA1APZ101	E.CAPACITOR 10V 100U	1	
C4518,19		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4520		VCEA1CAH100	E.CAPACITOR 16V 10U	1	
C4521		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4522		ECEA1HPZ3R3	E.CAPACITOR 50V 3.3U	1	
C4523		ECUM1H122KBN	C.CAPACITOR CH 50V 1200P	1	
C4524		ECEA1CPK100	E.CAPACITOR 16V 10U	1	
C4525		ECEA1CPZ220	E.CAPACITOR 16V 22U	1	
C4526		VCEA1CAH470	E.CAPACITOR 16V 47U	1	
C4527		VCEA1AAE101	E.CAPACITOR 10V 100U	1	
C4528		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C4529		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4530		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4531		ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C4532		ECEA1CPZ471	E.CAPACITOR 16V 470U	1	
C4533		ECEA1CPZ221	E.CAPACITOR 16V 220U	1	
C4534		VCEA1AAH101	E.CAPACITOR 10V 100U	1	
C4535		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4537		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C4538		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C4539		ECQV1H274JZ	P.CAPACITOR 50V 0.27U	1	
C4540-42		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C4543		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4545		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4551		ECEA1HBZ4R7	E.CAPACITOR 50V 4.7U	1	
C4553		ECQB1H102JA	P.CAPACITOR 50V 1000P	1	
C4554		ECQB1H223JA	P.CAPACITOR 50V 0.022U	1	
C4555		ECQB1H682JA	P.CAPACITOR 50V 6800P	1	
C4556		VCEA1EAE100	E.CAPACITOR 25V 10U	1	
C4557		ECQB1H223JA	P.CAPACITOR 50V 0.022U	1	
C4558		ECEA1EPH4R7	E.CAPACITOR 25V 4.7U	1	
C4559		VCEA1CAH470	E.CAPACITOR 16V 47U	1	
C4560		ECQB1H103JA	P.CAPACITOR 50V 0.01U	1	
C4561		ECQB1H332JA	P.CAPACITOR 50V 3300P	1	
C4562		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C4563,64		ECUM1H102JN	C.CAPACITOR CH 50V 1000P	2	
C4565		ECEA1HPZ4R7	E.CAPACITOR 50V 4.7U	1	
C4566		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4567		ECEA1APZ101	E.CAPACITOR 10V 100U	1	
C4568,69		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4570		VCEA1CAH100	E.CAPACITOR 16V 10U	1	
C4572		ECEA1HPZ3R3	E.CAPACITOR 50V 3.3U	1	
C4573		ECUM1H122KBN	C.CAPACITOR CH 50V 1200P	1	
C4574,75		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C4576,77		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C4578		ECEA1CPZ470	E.CAPACITOR 16V 47U	1	
C6001		ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C6002		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C6003		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6004		ECUM1H821KBN	C.CAPACITOR CH 50V 820P	1	
C8001		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C8002		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C8003-06		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C8007-11		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	5	
C8012,13		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C8014		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8015		ECQP1H392JZ	P.CAPACITOR 50V 3900P	1	
C8016		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C8017		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8018		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C8019		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8020-23		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C8024		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8025		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C8026		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8027,28		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C8029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
			DIODES		
D301		MA4091	DIODE	1	
D801		1SS254	DIODE	1	
D1001		MA4130H	DIODE	1	
D1002		MA4110L	DIODE	1	
D1003		MA4120H	DIODE	1	
D1004		MA165	DIODE	1	
D1005		MA4056H	DIODE	1	
D1006-08		MA165	DIODE	3	
D1009		MA723	DIODE	1	
D1010,11		MA165	DIODE	2	
D1012		ERA15-01	DIODE	1	
D1013,14		MA165	DIODE	2	
D1301,02		MA165	DIODE	2	
D1303		MA4062M	DIODE	1	
D1304		MA165	DIODE	1	
D1305,06		MA723	DIODE	2	
D1309		MA165	DIODE	1	
D2001		MA165	DIODE	1	
D3004		MA151WK	DIODE	1	
D3006,07		MA165	DIODE	2	
D3701-04		1SS99	DIODE	4	
D4001		MA151WK	DIODE	1	
D4003-05		MA165	DIODE	3	
D4501		MA165	DIODE	1	
D6001		MA165	DIODE	1	
D6002		AK04	DIODE	1	
D6003		MA151WA	DIODE	1	
D6004		MA723	DIODE	1	
D6005		MA165	DIODE	1	
D6006-08		MA151WA	DIODE	3	
D6009,10		MA151WK	DIODE	2	
D6012		MA723	DIODE	1	
D6013		MA151WK	DIODE	1	
D6014		MA723	DIODE	1	
D6015,16		MA151WK	DIODE	2	
D6017		MA723	DIODE	1	
D6018,19		MA151WA	DIODE	2	
D6021		MA151WA	DIODE	1	
D6022		MA165	DIODE	1	
D6023		MA151WA	DIODE	1	
D6025		MA151WA	DIODE	1	
D6029		MA723	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D6030		MA4056L	DIODE	1	
D8001		MA151WK	DIODE	1	
D8003,04		MA165	DIODE	2	
			DELAY		
DL802		EFDHR124A13S	DELAY	1	
			FUSE		
F1001		VSF0077	FUSE	1	<!>
			FILTERS		
FL301		VLF0499	FILTER	1	
FL302		ELB4M022	FILTER	1	
FL303		VLF0567	FILTER	1	
FL801		EFCS5R06MS4V	FILTER	1	
FL802		VLF0299	FILTER	1	
FL851		EFCS4R5MS4C	FILTER	1	
FL4504		VLF0825	FILTER	1	
FL4505		VLF0826	FILTER	1	
			ICS		
IC301		VEFH03D	HIC	1	
IC302		MSM6965-3RS	IC	1	
IC801		VEFH04F	HIC	1	
IC851		BA7025L	IC	1	
IC1301		AN6914S	IC	1	
IC2001		BA6432S	IC	1	
IC3701		MN74HCU04	IC	1	
IC4001		BA7766AS	IC	1	
IC4101		AN3912	IC	1	
IC4102		MN4066B	IC	1	
IC4201		RC4565DD	IC	1	
IC4301		MN4066BS	IC	1	
IC4501		BA7705K1	IC	1	
IC4502		UPC78L05J	IC	1	
IC6001		BU3761S	IC	1	
IC6002		MN74HC08	IC	1	
IC8001		UPD4528BG	IC	1	
IC8002		AN3396	IC	1	
			PIN		
KR851		VJR0163	PACK PIN 9P	1	
			COILS		
L301		VLQEL05F121K	COIL 120UH	1	
L302		VLQEL05F680K	COIL 68UH	1	
L303,04		VLQEL05F101K	COIL 100UH	2	
L305		VLQEL05F220K	COIL 22UH	1	
L306		VLQEL05F2R2K	COIL 2.2UH	1	
L307		VLQEL05F220K	COIL 22UH	1	
L308-10		VLQEL05F101K	COIL 100UH	3	
L801		VLQEL05F101K	COIL 100UH	1	
L802		VLQEL05F470K	COIL 47UH	1	
L803		VLQEL05F151K	COIL 150UH	1	
L804		VLQEL05F270K	COIL 27UH	1	
L805		VLQ0213K331	COIL 330UH	1	
L806		VLQ0213K681	COIL 680UH	1	
L807		VLQ0213K470	COIL 47UH	1	
L808		VLQEL05F101K	COIL 100UH	1	
L811		VLQ0213K150	COIL 15UH	1	
L812		VLQ0213K681	COIL 680UH	1	
L851		VLQEL05F101K	COIL 100UH	1	
L1001,02		VLQEL05F100K	COIL 10UH	2	
L2001		VLQEL05F102K	COIL 1000UH	1	
L2002		VLQEL05F101K	COIL 100UH	1	
L3001		VLQEL05F101K	COIL 100UH	1	
L3002		VLQEL05F3R3J	COIL 3.3UH	1	
L3003		VLQEL05F820K	COIL 82UH	1	
L3004		VLQEL05F151J	COIL 120UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L3005		VLQEL05R101J	COIL 100UH	1	
L3006		VLQEL05F101K	COIL 100UH	1	
L3007		VLQEL05F120J	COIL 12U	1	
L3011		VLQEL05F6R8J	COIL 6.8U	1	
L3012		VLQEL05F4R7J	COIL 4.7UH	1	
L3013		VLQEL05F270J	COIL 27UH	1	
L3014		VLQEL05F101K	COIL 100UH	1	
L3701		VLQEL05F101K	COIL 100UH	1	
L3702		VLQEL05F100J	COIL 10UH	1	
L3703		VLQEL05F270J	COIL 27UH	1	
L3704		VLQEL05F100J	COIL 10UH	1	
L3705		VLQEL05F120J	COIL 12U	1	
L3707,08		VLQEL05F101K	COIL 100UH	2	
L4001		VLQEL05F471K	COIL 470UH	1	
L4002		VLQEL07F153J	COIL 15MH	1	
L4033		VLQ0123	COIL 10MH	1	
L4101		VLQEL05F101K	COIL 100UH	1	
L4301		VLQEL05F101K	COIL 100UH	1	
L4501,02		VLQEL05F101K	COIL 100UH	2	
L4503		VLQ0407391K	COIL 390H	1	
L8001-04		VLQEL05F101K	COIL 100UH	4	
			CONNECTORS		
P1001		VJP2593	CONNECTOR(MALE) 15P	1	
P1001		VJS2383	CONNECTOR(FEMALE) 15P	1	
P1002		VJP1231T	CONNECTOR(MALE) 4P	1	
P1003		VJP1230T	CONNECTOR(MALE) 3P	1	
P1004		VJS2650A003Z	CONNECTOR(FEMALE) 3P	1	
P1005		VJP1149	CONNECTOR(MALE) 3P	1	
P1006		VJP1142	CONNECTOR(MALE) 3P	1	
P1007		VJP1232T	CONNECTOR(MALE) 5P	1	
P1008		VJP1141	CONNECTOR(MALE) 2P	1	
P1101		VJS2593	CONNECTOR(FEMALE) 15P	1	
P2001		VJP1932T	CONNECTOR(MALE) 15P	1	
P2002		VJP1229T	CONNECTOR(MALE) 2P	1	
P2003		VJP1230T	CONNECTOR(MALE) 3P	1	
P3001		VJP1238T	CONNECTOR(MALE) 11P	1	
P3002		VJP1237T	CONNECTOR(MALE) 10P	1	
P3003		VJP1235T	CONNECTOR(MALE) 8P	1	
P3004		VJP1931T	CONNECTOR(MALE) 14P	1	
P3006		VJP1233T	CONNECTOR(MALE) 6P	1	
P3010		VJS2650A008Z	CONNECTOR(FEMALE) 8P	1	
P4001		VJP1233T	CONNECTOR(MALE) 6P	1	
P4002		VJP1236T	CONNECTOR(MALE) 9P	1	
P4003		VJP1235T	CONNECTOR(MALE) 8P	1	
P4004		VJS2650A003Z	CONNECTOR(FEMALE) 3P	1	
P4005		VJP1230T	CONNECTOR(MALE) 3P	1	
P6001,02		VJP1236T	CONNECTOR(MALE) 9P	2	
P6003		VJS2650A007Z	CONNECTOR(FEMALE) 7P	1	
P6004		VJP1232T	CONNECTOR(MALE) 5P	1	
P6005		VJP1231T	CONNECTOR(MALE) 4P	1	
			PINS		
PJ3701,02		VJR0279	PACK PIN 7P	2	
PK301		VJR0128	PACK PIN 12P	1	
PK302		VJR0161	PACK PIN 11P	1	
PK303		VJR0129	PACK PIN 7P	1	
PK304		VJR0130	PACK PIN 5P	1	
PK1301		VJR0524	PACK PIN 8P	1	
PK4501		VJR0477	PACK PIN 21P	1	
PK4502,03		VJR0290	PACK PIN 12P	2	
			CONNECTOR		
PP3001,02		VJP1868	CONNECTOR(MALE) 18P	2	
			TRANSISTORS		
Q301		2SC1009A	TRANSISTOR	1	
Q302		2SA812	TRANSISTOR	1	
Q303,04		2SC1009A	TRANSISTOR	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q801		2SD601	TRANSISTOR CHIP	1	
Q802		2SA812	TRANSISTOR	1	
Q1001		2SD1275	TRANSISTOR	1	
Q1002		2SD1273	TRANSISTOR	1	(P)
Q1003		2SD636	TRANSISTOR	1	
Q1301		2SD601	TRANSISTOR CHIP	1	
Q1302		2SD1273	TRANSISTOR	1	
Q3001,02		2SB641	TRANSISTOR	2	
Q3003		2SD601	TRANSISTOR CHIP	1	
Q3004,05		2SC2295	TRANSISTOR	2	
Q3006		2SD1328	TRANSISTOR CHIP	1	
Q3007,08		2SC2295	TRANSISTOR	2	
Q3009		2SB709	TRANSISTOR CHIP	1	
Q3010		2SC2295	TRANSISTOR	1	
Q3015,16		2SC2295	TRANSISTOR	2	
Q3019		2SB970	TRANSISTOR	1	
Q3020		2SD601	TRANSISTOR CHIP	1	
Q3701,02		2SC2295	TRANSISTOR	2	
Q3703		2SB709	TRANSISTOR CHIP	1	
Q3704		2SD601	TRANSISTOR CHIP	1	
Q3705,06		2SB709	TRANSISTOR CHIP	2	
Q3707		2SC2295	TRANSISTOR	1	
Q3708		2SB709	TRANSISTOR CHIP	1	
Q3709-12		2SC2295	TRANSISTOR	4	
Q3715		2SC2295	TRANSISTOR	1	
Q4001		2SD639	TRANSISTOR	1	(R)
Q4501		MSD601	TRANSISTOR	1	
Q4502,03		2SD1757K	TRANSISTOR	2	
Q4504		MSB709	TRANSISTOR	1	
Q8001-12		2SD601	TRANSISTOR CHIP	12	
			COMBINATIONS		
QR301		DTC124EK	TRANSISTOR-RESISTOR	1	
QR302,03		DTC114YK	TRANSISTOR-RESISTOR	2	
QR304		DTC124EK	TRANSISTOR-RESISTOR	1	
QR305		DTC144EK	TRANSISTOR-RESISTOR	1	
QR306		DTC124EK	TRANSISTOR-RESISTOR	1	
QR307,08		UN4212	TRANSISTOR-RESISTOR	2	
QR801		DTC124EK	TRANSISTOR-RESISTOR	1	
QR803		DTC114YK	TRANSISTOR-RESISTOR	1	
QR1001		UN2213	TRANSISTOR-RESISTOR	1	
QR1002,03		UN2212	TRANSISTOR-RESISTOR	2	
QR1301		UN2211	TRANSISTOR-RESISTOR	1	
QR3001		DTC363EK	TRANSISTOR-RESISTOR	1	
QR3002		UN2212	TRANSISTOR-RESISTOR	1	
QR3003		UN2112	TRANSISTOR-RESISTOR	1	
QR3004		UN2213	TRANSISTOR-RESISTOR	1	
QR3005		UN2112	TRANSISTOR-RESISTOR	1	
QR3006		DTC363EK	TRANSISTOR-RESISTOR	1	
QR3007		UN2212	TRANSISTOR-RESISTOR	1	
QR3008,09		UN2213	TRANSISTOR-RESISTOR	2	
QR3701		UN2111	TRANSISTOR-RESISTOR	1	
QR3702		UN2213	TRANSISTOR-RESISTOR	1	
QR4003		DTC363EK	TRANSISTOR-RESISTOR	1	
QR4004		UN2213	TRANSISTOR-RESISTOR	1	
QR4101		UN2213	TRANSISTOR-RESISTOR	1	
QR4102		UN2112	TRANSISTOR-RESISTOR	1	
QR4301		UN2213	TRANSISTOR-RESISTOR	1	
QR4508,09		UN2113	TRANSISTOR-RESISTOR	2	
QR6001		UN2212	TRANSISTOR-RESISTOR	1	
QR6002,03		UN2113	TRANSISTOR-RESISTOR	2	
QR6004		UN2212	TRANSISTOR-RESISTOR	1	
QR6005		UN2213	TRANSISTOR-RESISTOR	1	
QR6006		UN2212	TRANSISTOR-RESISTOR	1	
QR6007		UN2211	TRANSISTOR-RESISTOR	1	
QR6008		UN2214	TRANSISTOR-RESISTOR	1	
QR6009,10		UN2112	TRANSISTOR-RESISTOR	2	
QR6011		UN2214	TRANSISTOR-RESISTOR	1	
QR6012		UN2213	TRANSISTOR-RESISTOR	1	
QR6013,14		UN2112	TRANSISTOR-RESISTOR	2	
QR6015		UN2214	TRANSISTOR-RESISTOR	1	
QR6016		UN2111	TRANSISTOR-RESISTOR	1	
QR6017		UN2114	TRANSISTOR-RESISTOR	1	
QR6018		UN2111	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR6019,20		UN2213	TRANSISTOR-RESISTOR	2	
QR6021		UN2211	TRANSISTOR-RESISTOR	1	
QR8001		DTC363EK	TRANSISTOR-RESISTOR	1	
QR8002		UN2212	TRANSISTOR-RESISTOR	1	
QR8003		UN2112	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R301		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R302		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R303		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R304		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R305		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R306		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R307		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R308		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R309		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R310		ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R311		ERJ6GMYJ474	M.RESISTOR CH 1/10W 470K	1	
R312		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R314		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R315		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R316		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R317		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R318		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R319		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R320		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R321		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R322		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R323		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R324		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R325		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R326		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R327		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R328		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R329		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R330		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R331		ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R332		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R333		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R334		ERJ6GMYJ824	M.RESISTOR CH 1/10W 820K	1	
R335		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R336		ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R801		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R802		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R803		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R804		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R805		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R806,07		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R808		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R809		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R810		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R811		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R812		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R813		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R814		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R815		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R822		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R824		ERJ6GMY0R00	M.RESISTOR CH 1/10W 0	1	
R851		ERDS2TJ223	C.RESISTOR 1/4W 22K	1	
R852		ERDS2TJ390	C.RESISTOR 1/4W 39	1	
R853		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	
R854		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R855		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R856		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R1001		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R1002		ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R1003		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R1004		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R1005		ERDS2FJ3R3	C.RESISTOR 1/4W 3.3	1	
R1301		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R1302		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R1303		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R1304,05		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R1306		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1307		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R1308-10		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	3	
R1311		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1312		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R2001		ERX12SJR82	M.RESISTOR 1/2W 0.82	1	
R2002		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R2003-05		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2006		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R2007		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R2008		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R2009		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2010		ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R3001		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3002		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3003		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3004		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R3005		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3006		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3007		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GEYJ680	M.RESISTOR CH 1/10W 68	1	
R3010		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3011,12		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R3013		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3014		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R3015,16		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R3018-20		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	3	
R3021		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3022		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R3023		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3024		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3027,28		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	2	
R3029		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3030		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3031		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R3032		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3036,37		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R3040		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R3041-43		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	3	
R3044		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R3050,51		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R3052		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3053		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3054		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3055		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R3701,02		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R3703		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R3704		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R3705		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R3706		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R3707		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3708		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R3709		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R3710		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3711		ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R3712		ERJ6GEYG123	M.RESISTOR CH 1/10W 12K	1	
R3713		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3714,15		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R3716		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R3717		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3718		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3719,20		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	2	
R3721		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3722		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3723		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3724		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3725		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3726		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R3727		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R3729		ERJ6GEYJ301	M.RESISTOR CH 1/10W 300	1	
R3732		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3733		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R4001		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R4002		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4003		EROS2CKG1802	M.RESISTOR 1/4W 18K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4004,05		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4006		ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R4007		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4008		ERJ6GEYG132	M.RESISTOR CH 1/10W 1.3K	1	
R4009		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R4010		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4011		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R4012		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4013		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R4014		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4015		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4016		ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R4017		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R4018		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4019,20		ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	2	
R4021		ERJ6GEYG473	M.RESISTOR CH 1/10W 47K	1	
R4022		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4023		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4024		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4025		ERJ6GEYG242	M.RESISTOR CH 1/10W 2.4K	1	
R4026		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R4027		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4028		ERJ6GEYG242	M.RESISTOR CH 1/10W 2.4K	1	
R4029		ERJ6GEYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4030		ERJ6GEYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4031		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4032		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4033		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4034		ERJ6GEYJ394	M.RESISTOR CH 1/10W 390K	1	
R4035		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R4036		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4037		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4038		ERJ6GEYG512	M.RESISTOR CH 1/10W 5.1K	1	
R4101		VRE0034E303	M.RESISTOR CH 1/10W 30K	1	
R4102		VRE0034E473	M.RESISTOR CH 1/10W 47K	1	
R4103		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4104		VRE0034E102	M.RESISTOR CH 1/10W 1K	1	
R4105		VRE0034E820	M.RESISTOR CH 1/10W 82	1	
R4106		VRE0034E113	M.RESISTOR CH 1/10W 11K	1	
R4201,02		ERDS2TJ680	C.RESISTOR 1/4W 68	2	
R4203,04		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R4205,06		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	2	
R4207,08		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
R4209,10		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4211		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4301-03		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
R4304		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4501		ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R4502		ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R4503		ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R4504		VRE0034E112	M.RESISTOR CH 1/10W 1.1K	1	
R4505		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4506		ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R4507		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4508		ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4511		ERJ6GEYG303	M.RESISTOR CH 1/10W 30K	1	
R4512		VRE0034E103	M.RESISTOR CH 1/10W 10K	1	
R4513		VRE0034E49B	M.RESISTOR CH 1/10W 3160	1	
R4514		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4515		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4517		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4518		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4519		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4520		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4521		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R4522		ERJ6GEYJ225	M.RESISTOR CH 1/10W 2.2M	1	
R4523		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4525,26		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R4527		VRE0034E223	M.RESISTOR CH 1/10W 22K	1	
R4528		VRE0034E393	M.RESISTOR CH 1/10W 39K	1	
R4529		ERJ6GEYG163	M.RESISTOR CH 1/10W 16K	1	
R4530		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R4533		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R4534		VRE0034E152	M.RESISTOR CH 1/10W 1.5K	1	
R4535		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4536		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4539		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4540		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4541		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R4542		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4551		ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R4552		ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R4553		ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R4554		VRE0034E112	M.RESISTOR CH 1/10W 1.1K	1	
R4555		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4556		ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R4557		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4558		ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4561		ERJ6GEYG303	M.RESISTOR CH 1/10W 30K	1	
R4562		VRE0034E123	M.RESISTOR CH 1/10W 12K	1	
R4563		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4564		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4565		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4566		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4567		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4568		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4569		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4572		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4573		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4576		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4577		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4578		VRE0034E113	M.RESISTOR CH 1/10W 11K	1	
R6001		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6002		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R6003		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R6004		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6005		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6006,07		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	2	
R6008		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6009,10		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R6011		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6012		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6014		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R6015		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R6016,17		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	2	
R6018		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R6019		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6020		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R8001		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8002		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8003		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8004		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R8005		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8006,07		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	2	
R8008		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8009		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R8010		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8011		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8012		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8013		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8014		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8015		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8016		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R8017		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8018		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8019		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8020		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R8021		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R8022		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R8023		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R8024		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8025		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R8027		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R8028		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8029		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8030		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8031		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
			TRANSFORMERS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
T851		ELM7Q207A	TRANSFORMER	1	
T4001		EIQ7QF014Q	TRANSFORMER	1	
			V.RESISTORS		
VR301		EVN3ACA00B14	V.RESISTOR 10K	1	
VR2006		EVND4AA00B25	V.RESISTOR 200K	1	
VR2011		EVND4AA00B25	V.RESISTOR 200K	1	
VR2013		EVND4AA00B23	V.RESISTOR 2K	1	
VR2020-22		EVND4AA00B25	V.RESISTOR 200K	3	
VR3001,02		EVND4AA00B52	V.RESISTOR 500	2	
VR3003		EVND4AA00B53	V.RESISTOR 5K	1	
VR4002		EVNDRAA00B25	V.RESISTOR 200K	1	
VR4004		EVND4AA00B53	V.RESISTOR 5K	1	
VR4501		EVMFLSA00B14	V.RESISTOR 10K	1	
VR4502		EVMF6SA00B24	V.RESISTOR 20K	1	
VR4507		EVN3ACA00B24	V.RESISTOR 20K	1	
VR4509		EVMFLSA00BS3	V.RESISTOR 6.8K	1	
VR4510		EVMFLSA00B14	V.RESISTOR 10K	1	
VR4520		EVMF6SA00B24	V.RESISTOR 20K	1	
VR4551,52		EVN3ACA00B25	V.RESISTOR 200K	2	
VR8001-03		EVND4AA00B53	V.RESISTOR 5K	3	
VR8004-06		EVND4AA00B13	V.RESISTOR 1K	3	
VR8007		EVMF6SA00B54	V.RESISTOR 50K	1	
VR8009		EVMF6SA00B25	V.RESISTOR 200K	1	
VR8010		EVND4AA00B53	V.RESISTOR 5K	1	
VR8011		EVND4AA00B13	V.RESISTOR 1K	1	
VR2001N		EVND4AA00B54	V.RESISTOR 50K	1	
VR2001P		EVND4AA00B54	V.RESISTOR 50K	1	
			CRYSTAL OSCILLATORS		
X301		VSX0225	CRYSTAL OSCILLATOR	1	
X801		VSX0162	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
E27		VJF0553	P.C.B. SUPPORT	2	MAIN C.B.A
E28		VKC0247	MAIN FRAME	2	MAIN C.B.A
E29		VKC0329	HINGE CLIP	2	MAIN C.B.A
E30		VMC0075	HEAT SINK FIX ANGLE	1	MAIN C.B.A
E31		VMZ1352	HEAT SINK COVER	1	MAIN C.B.A
E32		VSC1068	HEAT SINK	1	MAIN C.B.A
E33		VSC2734	HEAT SINK	1	MAIN C.B.A
E34		VMP2631	FUSE HOLD ANGLE	1	MAIN C.B.A
E35		VSC3207	SHIELD COVER (TOP)	1	Hi-Fi AUDIO PACK
E36		VSC3208	SHIELD COVER (MAIN)	1	Hi-Fi AUDIO PACK
E37		VSC3209	SHIELD COVER (BOTTOM)	1	Hi-Fi AUDIO PACK
	■	VEP04320A	I/O PACK C.B.A.		(NLA)
			CAPACITORS		
C3513		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C3514		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3515		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3516-19		ECEA1CK220	E.CAPACITOR 16V 22U	4	
C3520		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C4903,04		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4907,08		ECQB1H103JH	P.CAPACITOR 50V 0.01U	2	
C4909,10		ECQB1H332JH	P.CAPACITOR 50V 3300P	2	
C4911,12		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4913,14		ECQB1H682JH	P.CAPACITOR 50V 6800P	2	
C4915,16		ECQB1H183JH	P.CAPACITOR 50V 0.018U	2	
C4920,21		VCEA1CAD100	E.CAPACITOR 16V 10U	2	
C4922		VCEA1AAC101	E.CAPACITOR 10V 100U	1	
C4923		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C4924-26		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C4927		VCEA1AAC101	E.CAPACITOR 10V 100U	1	
C4928		VCEA1CAC101	E.CAPACITOR 16V 100U	1	
C4929		VCEA1AAC101	E.CAPACITOR 10V 100U	1	
C4932,33		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			DIODES		
D3501		MA165	DIODE	1	
D4901		MA4068-M	DIODE	1	
			ICS		
IC3501		M51292FP	IC	1	
IC4901		M51293FP	IC	1	
IC4902		UPC78L06T	IC	1	
			COILS		
L3501		VLQEL05F101K	COIL 100UH	1	
L4901-04		VLQ0172	COIL 1MH	4	
L4905,06		VLQ0213K101	COIL 10UH	2	
			CONNECTORS		
P3502		VJP1246T	CONNECTOR(MALE) 6P	1	
P3503		VJP1248T	CONNECTOR(MALE) 8P	1	
PK3501,02		VJS1868	CONNECTOR(FEMALE) 18P	2	
			TRANSISTOR		
Q4901		2SB644	TRANSISTOR	1	
			COMBINATION		
QR3501		UN2213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R3501		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3502		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3503		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3507		ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	1	
R3508		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3515		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3524		ERD2FCG220	C.RESISTOR 2W 22	1	
R3525		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3526,27		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	2	
R4902,03		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R4908,09		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	2	
R4910,11		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R4912,13		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R4916,17		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R4924		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R4925		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4926		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4927		ERJ6GEYG163	M.RESISTOR CH 1/10W 16K	1	
R4928		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4930		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4932		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4933		ERJ6GEYG163	M.RESISTOR CH 1/10W 16K	1	
R4934		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4935		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4936		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4937		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R4938		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4939		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4940		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4941		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4942		ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R4943-46		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	4	
R4947,48		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	2	
R4949,50		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	2	
R4951,52		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
			SWITCHS		
SW3501		VSS0187	SWITCH	1	OUTPUT SYSTEM SELECT
SW3502		VSS0162	SWITCH	1	OUTPUT SYSTEM SELECT

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTOR		
VR3501-03		EVN58AA00B25	V.RESISTOR 200K	3	
			MISCELLANEOUS		
E38		VGU2707	EDIT SW KNOB	2	
	■	VEP01446B	POWER SUPPLY C.B.A.		(NLA)
			CAPACITORS		
C1101,02		ECQU2A224MN	P.CAPACITOR 100V 0.22U	2	<!>
C1103		VCK0044	P.CAPACITOR 250V 1000P	1	<!>
C1104		VCK0044	P.CAPACITOR 250V 1000P	1	<!>
C1105		VCK0044	P.CAPACITOR 250V 1000P	1	<!>
C1106-08		VCK0044	P.CAPACITOR 250V 1000P	3	<!>
C1109-11		VCK0045	P.CAPACITOR 250V 1500P	3	<!>
C1112		VCF2AAC101JT	P.CAPACITOR 100V 100P	1	
C1113,14		ECOS2VA181	P.CAPACITOR 350V 180P	2	
C1115		ECQE6473J2	P.CAPACITOR 50V 0.047U	1	
C1116		ECKD3D331KBN	C.CAPACITOR 3KV 1000P	1	
C1117		ECEA2GG2R2	E.CAPACITOR 400V 2.2U	1	
C1118		ECQB1H682JF	P.CAPACITOR 50V 6800P	1	
C1119		ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C1120		ECQV1H684JF	P.CAPACITOR 50V 0.68U	1	
C1121		ECA1CXLV470	E.CAPACITOR 16V 47U	1	
C1122		ECQV1H334JF	P.CAPACITOR 50V 0.33U	1	
C1124		ECEA1HFE121	E.CAPACITOR 50V 120U	1	
C1125		ECEA1HFE270	E.CAPACITOR 50V 27U	1	
C1126		ECEA1VFE820	E.CAPACITOR 35V 82U	1	
C1127		ECEA1CFE331	E.CAPACITOR 16V 330U	1	
C1128		ECA1CFZ102	E.CAPACITOR 16V 1000U	1	
C1129		ECA1CFZ122	E.CAPACITOR 16V 1200U	1	
C1130		ECA1AFZ102	E.CAPACITOR 10V 1000U	1	
C1131		ECA0JFZ331	E.CAPACITOR 6.3V 330U	1	
C1132		ECA1AFZ391	E.CAPACITOR 10V 390U	1	
C1133-35		ECEA1AGE101	E.CAPACITOR 10V 100U	3	
C1136		ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1137		ECEA1CGE100	E.CAPACITOR 16V 10U	1	
C1138-43		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	6	
C1144-46		VCK0045	C.CAPACITOR 250V 1500P	3	<!>
C1147		VCK0045	C.CAPACITOR 250V 1500P	1	<!>
C1148		VCK0045	C.CAPACITOR 250V 1500P	1	<!>
C1149		VCK0045	C.CAPACITOR 250V 1500P	1	<!>
C1150		ECEA1HFE270	E.CAPACITOR 50V 27U	1	
			DIODES		
D1101-04		EM1B	DIODE	4	<!>
D1105		VSD0002	DIODE	1	
D1106		AP01C	DIODE	1	
D1107,08		MA178	DIODE	2	
D1109		MA4027-L	DIODE	1	
D1111		MA165	DIODE	1	
D1112,13		MA185	DIODE	2	
D1114		FMLG12SP	DIODE	1	
D1115		FMBG14L	DIODE	1	
D1116		21DQ04FC4	DIODE	1	
D1117		MA2160B	DIODE	1	
D1118		MA4130L	DIODE	1	
D1120,21		RD120E	DIODE	2	
D1122		MA165	DIODE	1	
			ICS		
IC1101		STRD6108E	IC	1	<!>
IC1102		STK5392	IC	1	
IC1103		SE013E	IC	1	
			COILS		
L1102		ELF18D618F	FILTER 6100H	1	<!>
L1103,04		VLQEL06F101K	COIL 100UH	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L1105,06		ELC07B009	COIL 22UH	2	
L1107,08		VLQ0410	COIL 22UH	2	
			CONNECTORS		
P1101		VJS2625	CONNECTOR(MALE) 15P	1	
P1102		VJP1930T	CONNECTOR(MALE) 3P	1	
P1103		VJP1149	CONNECTOR(MALE) 3P	1	
			TRANSISTORS		
Q1101		PC111AD	PHOTO COUPLER	1	<!>
Q1102-04		2SD1330	TRANSISTOR	3	
			RESISTORS		
R1101		ERC12AGM334	S.RESISTOR 1/2W 330K	1	
R1102		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R1104		ERDS2TJ474	C.RESISTOR 1/4W 470K	1	
R1106		ERDS1TJ563	C.RESISTOR 1/2W 56K	1	
R1108		EROS2CKG1300	M.RESISTOR 1/4W 130	1	
R1109		ERG3ANJ683	M.RESISTOR 3W 68K	1	
R1110		ERW1PK2R2	C.RESISTOR 1W 2.2	1	
R1111		ERW1PKR33	C.RESISTOR 1W 0.33	1	
R1112		ERDS2TO	C.RESISTOR 1/4W 0	1	
R1113		ERG3SJ270	M.RESISTOR 3W 27	1	
R1114		ERDS2TJ681	C.RESISTOR 1/4W 680	1	
R1115		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1116		ERG1SJ182E	M.RESISTOR 1W 1.8K	1	
R1117		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R1118		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R1119		ERDS2TJ680	C.RESISTOR 1/4W 68	1	
R1121		ERDS2TJ184	C.RESISTOR 1/4W 180K	1	
R1122		ERDS2TJ823	C.RESISTOR 1/4W 82K	1	
			SWITCH		
SW1101		ESD39714A	SWITCH	1	<!> VOLTAGE SELECT
			TRANSFORMER		
T1101		VLT0591	TRANSFORMER	1	<!>
			MISCELLANEOUS		
E39		VJF0318	FUSE HOLDER	2	<!>
E40		VEK5199	VOLTAGE SELECT SW UNIT	1	<!>
	■	VEP00Q52A	FRONT JACK C.B.A.		(NLA)
			CAPACITORS		
C4801,02		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4803,04		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	2	
			COIL		
L4801,02		VLQEL05F101K	COIL 100UH	2	
			CONNECTORS		
P4801		VJP1246T	CONNECTOR(MALE) 6P	1	
P4802		VEJ1055	CONNECTOR	1	
			RESISTORS		
R4801		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R4802,03		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
			MISCELLANEOUS		
E41		VMP0789	EARTH CLIP	1	
E42		VSC3212	SHIELD COVER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP00Q54A	LED C.B.A.		(NLA)
			LEDS		
D1551		LN81RCPHL	LED	1	
D1552		LN31GCPHLMU	LED	1	
			CONNECTOR		
P6401		VJP1232T	CONNECTOR(MALE) 5P	1	
			SWITCH		
SW1551		EVQQS307K	SWITCH	1	
			MISCELLANEOUS		
E43		KL-04	LED SPACER	2	
	■	VEP00Q55A	CONNECTION C.B.A.		(NLA)
			CONNECTORS		
P1571		VJS3009	CONNECTOR(FEMALE) 31P	1	
P1572		VJS1679	CONNECTOR(FEMALE) 9P	1	
P1573		VJP1394T	CONNECTOR(MALE) 13P	1	
P1574		VJP1246T	CONNECTOR(MALE) 6P	1	
P1575		VJP1243T	CONNECTOR(MALE) 3P	1	
	■	VEP03795A	ANALOGUE C.B.A.		(NLA)
			CAPACITORS		
C901		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C902		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C903		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C904		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C905		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C906,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C9301		ECUM1H050DCN	C.CAPACITOR CH 50V 50P	1	
C9302,03		ECUM1H040CCN	C.CAPACITOR CH 50V 4P	2	
C9304		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C9305-07		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	3	
C9308,09		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C9310,11		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C9312		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9313		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C9314,15		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
C9316,17		ECUM1H221KBN	C.CAPACITOR CH 50V 220P	2	
C9319		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C9320		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	1	
C9321		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9322		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9323		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C9324		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9325		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C9326		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C9327,28		ECUM1E223KBN	C.CAPACITOR CH 25V 0.023U	2	
C9329		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C9330		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9331		ECEA0JKN470	E.CAPACITOR 6.3V 47U	1	
C9332		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9333		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9334		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9336		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9337		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9338		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C9339		ECEA1CK470	E.CAPACITOR 16V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C9340		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C9342		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C9343		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C9344		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C9345		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C9346		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C9347		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C9348-50		ECRHC020D11	TRIMMER	3	
C9351		ECRHC060G1	TRIMMER	1	
C9352		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9353		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9401		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C9402		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C9403		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C9404		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C9405		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C9406		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C9407		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9408		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C9409		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9410		ECUM1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C9411		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C9412		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C9413		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C9414		ECQP1H472JZ	P.CAPACITOR 50V 4700P	1	
C9415		ECEA1CKN4R7	E.CAPACITOR 16V 4.7U	1	
C9416		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9417		ECEA1CKN4R7	E.CAPACITOR 16V 4.7U	1	
C9418		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C9419		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C9420		ECEA25M6R8	E.CAPACITOR 25V 6.8U	1	
C9421		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C9422		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C9423		ECEA25M6R8	E.CAPACITOR 25V 6.8U	1	
C9424		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C9425		ECQB1H104JH	P.CAPACITOR 50V 0.1U	1	
C9426		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9427		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C9428		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C9429		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C9430		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C9431		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C9432-35		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	4	
C9436		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C9437		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C9438		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9439		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9440		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9441		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C9442		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C9443,44		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	2	
C9501		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9502,03		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C9504-06		ECEA1CK100	E.CAPACITOR 16V 10U	3	
C9507		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9508,09		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C9510		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C9511		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C9512		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C9513		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C9514		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9515		ECQB1H473JH	P.CAPACITOR 50V 0.047U	1	
C9516		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9517		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9518		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9519		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C9520		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C9521		ECUM1H221KBN	C.CAPACITOR CH 50V 220P	1	
C9522		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9523,24		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C9525		ECQB1H104JH	P.CAPACITOR 50V 0.1U	1	
C9526		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9527		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C9528		ECUM1E333ZFN	C.CAPACITOR CH 25V 0.033U	1	
C9529		ECEA1CKN4R7	E.CAPACITOR 16V 4.7U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C9530		ECQB1H473JH	P.CAPACITOR 50V 0.047U	1	
C9531		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9532,33		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C9534-36		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	3	
C9537		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9538		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C9539		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9540		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9541		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C9542-45		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C9546		ECUM1H391JUN	C.CAPACITOR CH 50V 390P	1	
C9547		ECEA1AK220	E.CAPACITOR 10V 22U	1	
C9548		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9550		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9552		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9553		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9554-56		ECEA1CK100	E.CAPACITOR 16V 10U	3	
C9558,59		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C9560		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9561		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9562		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9563		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9564,65		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C9566,67		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	2	
C9568		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9569		ECUM1H121JUN	C.CAPACITOR CH 50V 120P	1	
C9570		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C9571,72		ECUM1E223KBN	C.CAPACITOR CH 25V 0.023U	2	
C9573		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C9574		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C9575		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9576		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C9577		ECUM1H221KBN	C.CAPACITOR CH 50V 220P	1	
C9578		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C9579		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C9580		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C9581		ECUM1H121JUN	C.CAPACITOR CH 50V 120P	1	
C9582		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C9583		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C9584		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C9585		ECUM1H121JUN	C.CAPACITOR CH 50V 120P	1	
C9587-91		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C9592		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9593,94		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C9595		ECEA1AKN470	E.CAPACITOR 10V 47U	1	
C9596		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9597		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9598		ECEA1CKN4R7	E.CAPACITOR 16V 4.7U	1	
C9599		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9600		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9601		ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C9602		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9603		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C9604		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9605		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C9606		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9607		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C9608		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9609		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C9610		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9611		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9612		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9613,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C9615		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9616		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9617		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9618		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C9619		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9620		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9621		ECQB1H471JH	P.CAPACITOR 50V 470P	1	
C9622		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C9623		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C9624		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9625		ECUM1H821KBN	C.CAPACITOR CH 50V 820P	1	
C9626		ECEA1CK100	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C9627		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9628		ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C9629,30		ECQB1H822JH	P.CAPACITOR 50V 8200P	2	
C9631		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C9632		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C9633		ECQP1H152JZ	P.CAPACITOR 50V 1500P	1	
C9634		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C9635		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9636		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9637		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9638		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9639		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9640		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9641		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9642		ECUM1H221KBN	C.CAPACITOR CH 50V 220P	1	
C9643		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9644		ECQM1H124JV	P.CAPACITOR 50V	1	
C9645		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9646		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C9647		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9648		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C9649		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C9650		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9651		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C9652		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9653		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C9654		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9655-58		ECRHC020D11	TRIMMER	4	
C9659-61		ECEA1CK100	E.CAPACITOR 16V 10U	3	
C9662		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C9663-65		ECEA1CK100	E.CAPACITOR 16V 10U	3	
C9666		ECUM1H561JCN	C.CAPACITOR CH 50V 560P	1	
C9667		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9668		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C9669		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C9670		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C9671		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9672		ECCF1H120JC	C.CAPACITOR 50V 12P	1	
C9673		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C9674		ECCF1H470JC	C.CAPACITOR 50V 47P	1	
C9675		ECCF1H680JC	C.CAPACITOR 50V 68P	1	
C9676		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C9677		ECUM1H221KBN	C.CAPACITOR CH 50V 220P	1	
C9678		ECEA1CKS330	E.CAPACITOR 16V 33U	1	
C9901		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9902		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9903		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9904		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9905		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9906		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C9907		ECQP1H152JZ	P.CAPACITOR 50V 1500P	1	
C9908		ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C9909		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C9910		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C9911		ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C9912		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9913		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C9914		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C9915		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C9916		ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C9917		ECQB1H473JH	P.CAPACITOR 50V 0.047U	1	
C9918		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C9919		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C9920		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9921		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
			DIODES		
D901-06		MA165	DIODE	6	
D9301		MA165	DIODE	1	
D9401		MA165	DIODE	1	
D9402		MA4082H	DIODE	1	
D9403		MA165	DIODE	1	
D9501		MA4091M	DIODE	1	
D9502-13		MA165	DIODE	12	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
DL9501		EFDKD645A51E	DELAY LINE	1	
DL9502		EFDAE645B25A	DELAY LINE	1	
			FILTERS		
FL9401		VLF0764	FILTER	1	
FL9402		VLF0762	FILTER	1	
FL9403		EIR7QF026Q	FILTER	1	
FL9404		EIR7QF027Q	FILTER	1	
FL9501		VLF0909	FILTER	1	
FL9502		VLF0838	FILTER	1	
FL9503		ELB4M091	FILTER	1	
FL9504		ELB4N048	FILTER	1	
FL9505		ELB4L132	FILTER	1	
FL9506		ELB4L133	FILTER	1	
FL9507		VLF0854	FILTER	1	
FL9508		ELB4T029	FILTER	1	
FL9509		VLF0855	FILTER	1	
FL9510		VLF0839	FILTER	1	
			ICS		
IC901		UPD4538BG	IC	1	
IC902,03		UPD4013BG	IC	2	
IC904		UPD4040BG	IC	1	
IC9301		AN3171S	IC	1	
IC9302		AN3181S	IC	1	
IC9303		MN4066BS	IC	1	
IC9304		MN4053BS	IC	1	
IC9401		TDA2594	IC	1	
IC9402		TDA2507	IC	1	
IC9403		TDA2506	IC	1	
IC9501,02		TA7348P	IC	2	
IC9503		AN3942SB	IC	1	
IC9504,05		M52055FP	IC	2	
IC9506		UPD4528BG	IC	1	
IC9507		TDA4555	IC	1	
IC9508		UPD4069UBG	IC	1	
IC9509		MN4053BS	IC	1	
IC9510		UPD4538BG	IC	1	
IC9511,12		UPD4528BG	IC	2	
IC9513		AN2510S	IC	1	
IC9514		AN1393S	IC	1	
IC9515		TA7357P	IC	1	
IC9516		MN4053BS	IC	1	
IC9517,18		TA7348P	IC	2	
IC9519		AN78M05F	IC	1	
IC9520		UPD4528BG	IC	1	
IC9521		MN4053BS	IC	1	
IC9901		AN2510S	IC	1	
IC9902		LA7800	IC	1	
			COILS		
L901		VLQEL05F101K	COIL 100UH	1	
L9301-05		VLQEL05F101K	COIL 100UH	5	
L9306,07		VLQEL05F680K	COIL 68UH	2	
L9308		VLQEL05F270K	COIL 27UH	1	
L9309		VLQEL05F100J	COIL 10UH	1	
L9310		VLQEL05F180K	COIL 18UH	1	
L9311		VLQEL05F8R2K	COIL 8.2UH	1	
L9401-03		VLQEL05F101K	COIL 100UH	3	
L9404		EIK7QE002Q	COIL-CAPACITOR	1	
L9501,02		VLQEL05F101K	COIL 100UH	2	
L9505		VLQEL05F101K	COIL 100UH	1	
L9507		VLQEL05F101K	COIL 100UH	1	
L9510		VLQEL05F101K	COIL 100UH	1	
L9511		VLQEL05F100K	COIL 10UH	1	
L9512-17		VLQEL05F101K	COIL 100UH	6	
L9518,19		VLQEL05F150K	COIL 15UH	2	
L9520-23		VLQEL05F101K	COIL 100UH	4	
L9524		VLQEL05F8R2K	COIL 8.2UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L9525		VLQEL05F101K	COIL 100UH	1	
L9526		EIK7QE001B	COIL	1	
L9527-29		EIK7ES719B	COIL	3	
L9530		EIK7ES011B	COIL	1	
L9531		EIK7ES002B	COIL	1	
L9532		EIK7ES011B	COIL	1	
L9533		VLQEL05F390K	COIL 39UH	1	
L9534		VLQEL05F121J	COIL 120UH	1	
L9901-03		VLQEL05F101K	COIL 100UH	3	
			CONNECTORS		
P901		VJP1236T	CONNECTOR(MALE) 9P	1	
P9501		VJP1233T	CONNECTOR(MALE) 6P	1	
P9502		VJP1231T	CONNECTOR(MALE) 4P	1	
P9503		VJP1232T	CONNECTOR(MALE) 5P	1	
P9504		VJP1233R	CONNECTOR(MALE) 6P	1	
P9505		VJP1932T	CONNECTOR(MALE) 15P	1	
P9506		VJP1931T	CONNECTOR(MALE) 14P	1	
P9507		VJP1239T	CONNECTOR(MALE) 12P	1	
P9508		VJP1511T	CONNECTOR(MALE) 11P	1	
P9509		VJP1233T	CONNECTOR(MALE) 6P	1	
P9510		VJP1230T	CONNECTOR(MALE) 3P	1	
			TRANSISTORS		
Q9301-05		2SD601	TRANSISTOR CHIP	5	
Q9306		2SC2295	TRANSISTOR	1	
Q9307		2SA1022	TRANSISTOR	1	
Q9308		2SD601	TRANSISTOR CHIP	1	
Q9310		2SB709	TRANSISTOR CHIP	1	
Q9401,02		2SB709	TRANSISTOR CHIP	2	
Q9403-05		2SD601	TRANSISTOR CHIP	3	
Q9406		2SB709	TRANSISTOR CHIP	1	
Q9407-11		2SD601	TRANSISTOR CHIP	5	
Q9501		2SD601	TRANSISTOR CHIP	1	
Q9502-05		2SB709	TRANSISTOR CHIP	4	
Q9506,07		2SD601	TRANSISTOR CHIP	2	
Q9508-12		2SB709	TRANSISTOR CHIP	5	
Q9513-26		2SD601	TRANSISTOR CHIP	14	
Q9527		2SB709	TRANSISTOR CHIP	1	
Q9528-44		2SD601	TRANSISTOR CHIP	17	
Q9545		2SD1328	TRANSISTOR CHIP	1	
Q9546		2SD601	TRANSISTOR CHIP	1	
Q9547		2SD1328	TRANSISTOR CHIP	1	
Q9548		2SB709	TRANSISTOR CHIP	1	
Q9549		2SD601	TRANSISTOR CHIP	1	
Q9550		2SB709	TRANSISTOR CHIP	1	
Q9551		2SD601	TRANSISTOR CHIP	1	
Q9552		2SB709	TRANSISTOR CHIP	1	
Q9553-55		2SD601	TRANSISTOR CHIP	3	
Q9558		2SD601	TRANSISTOR CHIP	1	
Q9901		2SD601	TRANSISTOR CHIP	1	
Q9904		2SD601	TRANSISTOR CHIP	1	
			COMBINATIONS		
QR901,02		UN2213	TRANSISTOR-RESISTOR	2	
QR9301-05		UN2213	TRANSISTOR-RESISTOR	5	
QR9501-07		UN2213	TRANSISTOR-RESISTOR	7	
QR9509-14		UN2213	TRANSISTOR-RESISTOR	6	
QR9515,16		DTC363TK	TRANSISTOR-RESISTOR	2	
QR9517-19		UN2213	TRANSISTOR-RESISTOR	3	
QR9520,21		UN2113	TRANSISTOR-RESISTOR	2	
QR9522		UN2213	TRANSISTOR-RESISTOR	1	
QR9523		UN2113	TRANSISTOR-RESISTOR	1	
QR9524-26		UN2213	TRANSISTOR-RESISTOR	3	
QR9527		UN2113	TRANSISTOR-RESISTOR	1	
QR9528-32		UN2213	TRANSISTOR-RESISTOR	5	
QR9533		UN2113	TRANSISTOR-RESISTOR	1	
QR9534,35		UN2213	TRANSISTOR-RESISTOR	2	
QR9537		UN2213	TRANSISTOR-RESISTOR	1	
QR9540		UN2213	TRANSISTOR-RESISTOR	1	
QR9542		UN2213	TRANSISTOR-RESISTOR	1	
QR9901		UN2211	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR9902		UN2111	TRANSISTOR-RESISTOR	1	
QR9903-05		UN2213	TRANSISTOR-RESISTOR	3	
QR9906		UN2113	TRANSISTOR-RESISTOR	1	
QR9907		UN2213	TRANSISTOR-RESISTOR	1	
QR9908		UN2113	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R901		ERJ6GEYG184	M.RESISTOR CH 1/10W 180K	1	
R902		ERJ6GEYG124	M.RESISTOR CH 1/10W 120K	1	
R903-07		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	5	
R908		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R909		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R910		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9301-08		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	8	
R9309		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R9310		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9311		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R9312		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9313		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9314		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R9315		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9316		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9317		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9318		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R9321		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9322		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R9323		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R9324		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R9325		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R9326,27		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R9328		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R9329		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R9330		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R9331		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9332		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R9333		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9334		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R9335		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9336		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R9337		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9338		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R9339		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9340		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9341		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R9342,43		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R9344		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R9345		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9346		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R9347		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9348		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R9349		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9350		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9352,53		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	2	
R9354,55		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R9356		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R9357		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R9358		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9359		ERJ6GEYJ560	M.RESISTOR CH 1/10W 56	1	
R9361		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R9401		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R9402		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9403		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9404		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9405		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9407		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9408		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9409		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9410		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9411		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9412		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9413		ERJ6GEYJ823	M.RESISTOR CH 1/10W 82K	1	
R9414		ERD2FCG120	C.RESISTOR 2W 12	1	
R9415		ERD2FCG100	C.RESISTOR 2W 10	1	
R9416		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R9417		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R9418		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R9419		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9420		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R9421		ERDS2TJ225	C.RESISTOR 1/4W 2.2M	1	
R9422		ERDS2TJ185	6C.RESISTOR 1/4W 1.8M	1	
R9423		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R9424		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9425		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R9426		ERJ6GEYG123	M.RESISTOR CH 1/10W 12K	1	
R9427		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R9428,29		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	2	
R9430		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9431		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9432		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9433		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R9434		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R9435		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9436		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9437		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9438		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9439		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R9440		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9441,42		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	2	
R9443-46		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	4	
R9447		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R9448		ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R9449		ERJ6GEYG113	M.RESISTOR CH 1/10W 11K	1	
R9450		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R9451		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R9452		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9453		ERJ6GEYJ560	M.RESISTOR CH 1/10W 56	1	
R9454		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9455		ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R9456		ERJ6GEYG333	M.RESISTOR CH 1/10W 33K	1	
R9457		ERJ6GEYG113	M.RESISTOR CH 1/10W 11K	1	
R9458		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R9459		ERJ6GEYOROO	M.RESISTOR CH 1/10W 0	1	
R9501		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R9502		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R9503		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9504		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R9505		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R9506		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9507,08		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R9509		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9510		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9511		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R9512		ERD25TJ121	C.RESISTOR 1/4W 120	1	
R9513		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9515		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R9516		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R9518,19		ERJ6GEYOROO	M.RESISTOR CH 1/10W 0	2	
R9520,21		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R9523		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9524		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R9525		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9526		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9527		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9528-31		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	4	
R9532		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R9533		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9534		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9535,36		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	2	
R9537-40		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R9541		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R9542		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R9543		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R9544		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9545		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R9546		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R9547		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R9548		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9549		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9550,51		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R9552		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9553		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R9554		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R9555		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9556		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9558		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9559		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R9560		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9562		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9563		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R9564-69		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	6	
R9570		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9571		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R9572		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R9573		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R9574		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R9576		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9577		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9578		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R9579		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R9580-83		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	4	
R9584		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R9585		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R9586		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R9587		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
R9588		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9589		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R9590		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R9591		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9592		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9593		ERJ6GEYOROO	M.RESISTOR CH 1/10W 0	1	
R9594		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R9595		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9596		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9597		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9598-00		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
R9601,02		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	2	
R9606		ERJ6GEYG512	M.RESISTOR CH 1/10W 5.1K	1	
R9607		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9608		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9609,10		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R9611		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R9612		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R9613		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R9614		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R9615,16		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	2	
R9617		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R9618		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R9619,20		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	2	
R9621,22		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R9623		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9624		ERJ6GEYJ151	M.RESISTOR CH 1/10W 150	1	
R9625		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9626		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9627		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9628		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R9629,30		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	2	
R9631		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R9632-34		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	3	
R9635,36		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R9637		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9638		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9639		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9640		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R9641		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9642		ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R9643		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9644		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R9645		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9646		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9647,48		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R9649,50		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R9651,52		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R9653,54		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R9655		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R9656		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R9657		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9658		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9659,60		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	2	
R9661		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9662		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R9663		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9664		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R9665		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9666,67		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R9668,69		ERJ6GEYJ680	M.RESISTOR CH 1/10W 68	2	
R9670		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R9671		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9673		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R9674-77		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	4	
R9678		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9679		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R9680		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9681		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R9682		ERJ6GEYG333	M.RESISTOR CH 1/10W 33K	1	
R9683		ERJ6GEYJ823	M.RESISTOR CH 1/10W 82K	1	
R9684		ERJ6GEYG393	M.RESISTOR CH 1/10W 39K	1	
R9685		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9686		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9687		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9688		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R9689		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9690		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9691		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R9692,93		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R9694		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9695		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R9696		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9697		ERJ6GEYG823	M.RESISTOR CH 1/10W 82K	1	
R9698		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R9699		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9700		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R9701		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R9702		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R9703		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9704,05		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R9706		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9707		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9708		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R9709		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9710		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9711		ERJ6GEYG622	M.RESISTOR CH 1/10W 6.2K	1	
R9712		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R9713,14		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R9715		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9716		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9717		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9718		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R9719		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9720		ERJ6GEYG333	M.RESISTOR CH 1/10W 33K	1	
R9721		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R9722		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9723		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R9724		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R9725		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9726		ERJ6GEYG822	M.RESISTOR CH 1/10W 8.2K	1	
R9727		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9728		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R9729		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9730		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R9731		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9732		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9734		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9735		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9736		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9737		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9738		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9739		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9740		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9741,42		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R9743		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9744		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9745		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9746		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9747		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9748		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R9749		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9750		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R9751		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R9752		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R9753-56		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	4	
R9758		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9759,60		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	2	
R9763,64		ERJ6GEYJ560	M.RESISTOR CH 1/10W 56	2	
R9765		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R9766		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9767		ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R9768		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R9770		ERTD2FHK102S	THERMISTOR 1K	1	
R9771		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R9772		ERTD2FHK102S	THERMISTOR 1K	1	
R9773		ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R9774		ERTD2FHK102S	THERMISTOR 1K	1	
R9775		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R9776		ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R9901		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9902		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9903		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R9904		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R9905		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9906		ERJ6GEYG622	M.RESISTOR CH 1/10W 6.2K	1	
R9907		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R9908		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R9909		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R9910		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R9911		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R9912		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R9913		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R9914		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R9915		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R9916		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R9917,18		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	2	
R9919		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R9923		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R9924		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9925		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9926		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R9927		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R9928		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9929		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
			V.RESISTORS		
VR9301,02		EVN4YCA00B24	V.RESISTOR 20K	2	
VR9303		EVN4YCA00B13	V.RESISTOR 1K	1	
VR9305-08		EVN4YCA00B14	V.RESISTOR 10K	4	
VR9309		EVN4YCA00B23	V.RESISTOR 2K	1	
VR9310,11		EVN4YCA00B52	V.RESISTOR 500	2	
VR9401		EVN4YCA00B24	V.RESISTOR 20K	1	
VR9402		EVN4YCA00B23	V.RESISTOR 2K	1	
VR9403		EVN4YCA00B13	V.RESISTOR 1K	1	
VR9501		EVN4YCA00B23	V.RESISTOR 2K	1	
VR9503-08		EVN4YCA00B23	V.RESISTOR 2K	6	
VR9509-11		EVN4YCA00B13	V.RESISTOR 1K	3	
VR9512		EVN4YCA00B14	V.RESISTOR 10K	1	
VR9514		EVN4YCA00B52	V.RESISTOR 500	1	
VR9515		EVN4YCA00B53	V.RESISTOR 5K	1	
VR9516,17		EVN4YCA00B52	V.RESISTOR 500	2	
VR9518-22		EVN4YCA00B23	V.RESISTOR 2K	5	
VR9530		EVN4YCA00B13	V.RESISTOR 1K	1	
VR9901		EVN4YCA00B53	V.RESISTOR 5K	1	
VR9902,03		EVN4YCA00B25	V.RESISTOR 200K	2	
VR9904		EVN4YCA00B23	V.RESISTOR 2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CRYSTAL OSCILLATORS		
X9301		VSX0428	CRYSTAL OSCILLATOR	1	
X9302		VSX0427	CRYSTAL OSCILLATOR	1	
X9303		VSX0426	CRYSTAL OSCILLATOR	1	
X9304		VSX0261	CRYSTAL OSCILLATOR	1	
X9501		EF0A5004BR	CERAMIC OSCILLATOR	1	
X9502		VSX0425	CRYSTAL OSCILLATOR	1	
X9503		VSX0426	CRYSTAL OSCILLATOR	1	
X9504		VSX0427	CRYSTAL OSCILLATOR	1	
X9505		VSX0428	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
E44		VKC0271	HINGE CLIP	2	
	■	VEP03796A	DIGITAL C.B.A.		(NLA)
			CAPACITORS		
C9001		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9002		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9003		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9005		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9006		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9007,08		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C9009		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9010,11		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C9012		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C9013		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C9015-21		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	7	
C9022,23		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	2	
C9024		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9025		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9026		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9027		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9028-30		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C9031		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C9032,33		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C9034,35		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C9036-38		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C9039		ECEA0JU470	E.CAPACITOR 6.3V 47U	1	
C9040		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9041		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C9042,43		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C9044		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9045		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C9046		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9047		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9048		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C9049		ECEA0JU470	E.CAPACITOR 6.3V 47U	1	
C9050		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9051		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C9052,53		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C9054,55		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C9056		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9057		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C9058		ECEA0JU470	E.CAPACITOR 6.3V 47U	1	
C9059		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9060		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C9061,62		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C9063,64		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C9065		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9066,67		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	2	
C9068		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9069		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C9070		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9071		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C9072		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C9073		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9074		ECEA1AK470	E.CAPACITOR 10V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C9075		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9077		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9078		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9079		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9080,81		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C9082		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9083,84		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C9086		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C9087		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C9088		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9089,90		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C9091		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9092,93		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C9094-97		ECEA0JK470	E.CAPACITOR 6.3V 47U	4	
C9098		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C9099-10		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	12	
C9111-21		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	11	
C9122,23		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C9124		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C9201-03		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	3	
C9204,05		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C9206		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C9207		ECUM1H122KBN	C.CAPACITOR CH 50V 1200P	1	
C9208		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C9209		ECUM1H122KBN	C.CAPACITOR CH 50V 1200P	1	
			DIODES		
D9202,03		MA165	DIODE	2	
D9204		MA723	DIODE	1	
D9205		MA165	DIODE	1	
			FILTERS		
FL9001,02		ELKAW101GB	FILTER	2	
FL9003		ELKAW103EB	FILTER	1	
FL9004		ELKAW101GB	FILTER	1	
FL9005		ELKAW103EB	FILTER	1	
FL9006-09		VLF0634	FILTER	4	
FL9010-23		ELKAW101GB	FILTER	14	
FL9024,25		VLF0633	FILTER	2	
FL9026,27		ELKAW101GB	FILTER	2	
FL9028-30		VLF0634	FILTER	3	
FL9031,32		VLF0633	FILTER	2	
FL9033-37		VLF0634	FILTER	5	
FL9038		ELKAW101GB	FILTER	1	
FL9201-03		ELKAW101GB	FILTER	3	
			ICS		
IC9001		MN53060VPJ	IC	1	
IC9002		MN53030VPK	IC	1	
IC9003		MN53020VMA	IC	1	
IC9004		MN1280R	IC	1	
IC9005,06		MN4760S	IC	2	
IC9007-09		HA19510	IC	3	
IC9010		MN4710F	IC	1	
IC9011		MN4712F	IC	1	
IC9012,13		HA19211BNT	IC	2	
IC9014		MN74HC4066S	IC	1	
IC9015		MN4584BS	IC	1	
IC9016		MN74HC04S	IC	1	
IC9201,02		UPD4013BG	IC	2	
			COILS		
L9001,02		VLQ0188J2R2K	COIL 2.2UH	2	
L9003		VLP0053	COIL	1	
L9004,05		VLP0054	COIL	2	
L9006,07		VLP0053	COIL	2	
L9008-14		VLQ0188J2R2K	COIL 2.2UH	7	
L9015-18		VLP0053	COIL	4	
L9201		VLQEL05F101K	COIL 100UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
P1003		VJS1230T	CONNECTOR(FEMALE) 3P	1	
P9001		VJP1234T	CONNECTOR(MALE) 7P	1	
P9001		VJS1234T	CONNECTOR(FEMALE) 7P	1	
P9002		VJP1931T	CONNECTOR(MALE) 14P	1	
P9003		VJP1238T	CONNECTOR(MALE) 11P	1	
P9004		VJP1239T	CONNECTOR(MALE) 12P	1	
			TRANSISTORS		
Q9001-09		2SD601	TRANSISTOR CHIP	9	
Q9010,11		2SB709	TRANSISTOR CHIP	2	
Q9012		2SD601	TRANSISTOR CHIP	1	
Q9201-06		2SD601	TRANSISTOR CHIP	6	
Q9207,08		2SB709	TRANSISTOR CHIP	2	
			COMBINATIONS		
QR9201		UN2213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R9001		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9002		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9003		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9004		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9005		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9006		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9007		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R9008		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9009		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9010		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9011		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R9012		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R9013		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R9014		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9015		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9016		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9017		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9018		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9019		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9020		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9021		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9022		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9023-31		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	9	
R9032,33		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
R9034		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R9035-40		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	6	
R9041,42		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R9043		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R9044		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9045		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9046		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9047		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R9048		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9049		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9050		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9051		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R9052		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9053		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9054		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9055,56		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	2	
R9057		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9058		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9059		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9060		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R9061		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9062		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R9063		ERJ6GEYJ151	M.RESISTOR CH 1/10W 150	1	
R9064		ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R9065		ERJ6GEYJ151	M.RESISTOR CH 1/10W 150	1	
R9066		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9067		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R9068,69		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	2	
R9070		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R9071		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9072		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9201		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9202		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9203		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9204		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9205		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9206-10		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	5	
R9211-13		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
R9214		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R9215		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R9216		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9217		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R9218,19		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R9220		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R9221		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R9222-24		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	3	
R9225-27		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
R9228,29		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R9230		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R9231-34		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	4	
R9235		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R9236		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R9238		ERDS2T0	C.RESISTOR 1/4W 0	1	
			CRYSTAL OSCILLATOR		
X9001		VSX0429	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
E45		VSC2332	SHIELD COVER (BOTTOM)	1	
E46		VSC2331	SHIELD COVER (MAIN)	1	
E47		VSC2330	SHIELD COVER (TOP)	1	
E48		VSC2333	PLATE	1	
	■	VEP05159A	HEAD AMP C.B.A.		(NLA)
			CAPACITORS		
C501		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C502,03		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C504		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C505,06		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C507,08		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C509		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C510		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C511		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C512		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C513		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C514		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C515		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C516		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C517		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C518		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C519-21		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C522		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C523		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C524,25		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C526		ECUM1H050DCN	C.CAPACITOR CH 50V 50P	1	
C527		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C528		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C529		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C551		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C552		ECEA0JPK101	E.CAPACITOR 6.3V 100U	1	
C553		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C555-59		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C560		ECEA0JPK470	E.CAPACITOR 6.3V 47U	1	
C561		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C562,63		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	2	
C564,65		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C566		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C567		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C569		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C570		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C576		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C577		ECEA0JPK101	E.CAPACITOR 6.3V 100U	1	
C578		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C581,82		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C586		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C587		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C588		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C589,90		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C591		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C592		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C593		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C594		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C595		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
			DIODE		
D501,02		MA165	DIODE	2	
			ICS		
IC501		AN3334K	IC	1	
IC551,52		BA7743FS	IC	2	
			COILS		
L501,02		VLQEL05F101K	COIL 100UH	2	
L503		VLP0089	COIL	1	
L551,52		VLQEL05F101K	COIL 100UH	2	
L577		VLQEL05F101K	COIL 100UH	1	
			CONNECTORS		
P502		VJS3011R	CONNECTOR(FEMALE) 15P	1	
P551		VJP1236T	CONNECTOR(MALE) 9P	1	
P552		VJP1251T	CONNECTOR(MALE) 11P	1	
			TRANSISTOR		
Q501		2SB709	TRANSISTOR CHIP	1	
			COMBINATIONS		
QR501		UN2213	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R501		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R502		ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R503		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R505		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R506		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R507		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R508		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R509		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R510		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R511		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R512		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R513		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R514		VRE0034E100	M.RESISTOR CH 1/10W 10	1	
R515		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R516		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R517-19		ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	3	
R551,52		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R553		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R554		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R555		ERJ6GEYG243	M.RESISTOR CH 1/10W 24K	1	
R556		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R557		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R558		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R559		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R560		ERJ8GCYJ332	M.RESISTOR CH 1/8W 3.3K	1	
R561,62		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R563		ERJ8GCYJ332	M.RESISTOR CH 1/8W 3.3K	1	
R564		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R565		VRE0034E100	M.RESISTOR CH 1/10W 10	1	
R568		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R577		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R578		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R579		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R580		ERJ6GEYG243	M.RESISTOR CH 1/10W 24K	1	
R581		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R582		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R583		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R584		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R585		ERJ8GCYJ332	M.RESISTOR CH 1/8W 3.3K	1	
R586,87		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R588		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R589		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R590		VRE0034E100	M.RESISTOR CH 1/10W 10	1	
R593		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
			V.RESISTOR		
VR501		EVND1AA00B23	V.RESISTOR 2K	1	
			MISCELLANEOUS		
E49		VSC3210	SHIELD COVER (MAIN)	1	
E50		VSC3211	SHIELD COVER (BOTTOM)	1	
E51		VSC2668	SHIELD COVER (TOP)	1	
	■	VEP06709A	DRIVE C.B.A.		(NLA)
			CAPACITORS		
C99301		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C99302,03		ECQB1H273JH	P.CAPACITOR 50V 0.027U	2	
C99304,05		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C99306		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C99307,08		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C99309		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C99310		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
			DIODES		
D99301-07		MA165	DIODE	7	
D99308,09		MA723	DIODE	2	
D99311		MA165	DIODE	1	
D99312		MA723	DIODE	1	
D99316-26		MA165	DIODE	11	
D99327,28		MA723	DIODE	2	
D99329,30		MA165	DIODE	2	
			ICS		
IC99301,02		MN4081BS	IC	2	
IC99303		MN4538BS	IC	1	
IC99304		MN74HC157S	IC	1	
IC99305		MN4503BS	IC	1	
IC99306		MN1280R	IC	1	
IC99307		MN1554VSSW	IC	1	
IC99308,09		MN74HC4049S	IC	2	
IC99310		MN74HC4050S	IC	1	
IC99311		MN4503BS	IC	1	
			COILS		
L99301		VLQEL05F101K	COIL 100UH	1	
			CONNECTORS		
P1574		VJS1233T	CONNECTOR(FEMALE) 6P	1	
P1575		VJS1230T	CONNECTOR(FEMALE) 3P	1	
P8505		VJS1235T	CONNECTOR(FEMALE) 8P	1	
P9305		VJS1233T	CONNECTOR(FEMALE) 6P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P9310		VJS1236T	CONNECTOR(FEMALE) 9P	1	
P99301		VJP1230T	CONNECTOR(MALE) 3P	1	
P99303		VJP1233T	CONNECTOR(MALE) 6P	1	
P99304		VJP1393T	CONNECTOR(MALE) 13P	1	
P99305		VJP1233T	CONNECTOR(MALE) 6P	1	
P99306		VJS2650A005Z	CONNECTOR(FEMALE) 5P	1	
P99307		VJP1932T	CONNECTOR(MALE) 15P	1	
P99308		VJP1235T	CONNECTOR(MALE) 8P	1	
P99310		VJP1236T	CONNECTOR(MALE) 9P	1	
P99313		VJP1233R	CONNECTOR(MALE) 6P	1	
P99314		VJP1233T	CONNECTOR(MALE) 6P	1	
P99315		VJP1232T	CONNECTOR(MALE) 5P	1	
			TRANSISTOR		
Q99301-07		2SD1330	TRANSISTOR	7	(S,T)
			COMBINATIONS		
QR99301-03		UN2213	TRANSISTOR-RESISTOR	3	
QR99304		2SD1676	COMBINATION PARTS	1	
QR99305-09		UN2213	TRANSISTOR-RESISTOR	5	
QR99310		UN1112	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R99301-06		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	6	
R99307		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R99308,09		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R99310		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R99311,12		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	2	
R99313-19		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	7	
R99320		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R99321		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R99322		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R99323		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R99324		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R99325		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R99326,27		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
R99328-33		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	6	
R99334		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R99335		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R99336		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R99337		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R99338		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R99339		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R99340,41		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R99342		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R99343,44		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R99345		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R99349,50		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R99351		ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R99352		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R99353		ERDS2T0	C.RESISTOR 1/4W 0	1	
R99354,55		ERDS2TJ562	C.RESISTOR 1/4W 5.6K	2	
R99356,57		ERDS2TJ273	C.RESISTOR 1/4W 27K	2	
R99358		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
			CRYSTAL OSCILLATOR		
X99301		VSX0060	CRYSTAL OSCILLATOR	1	
	■	VEP06710B	OPERATION C.B.A.		(NLA)
			CONNECTORS		
P6801		VJP1243T	CONNECTOR(MALE) 3P	1	
P6802		VJP1249T	CONNECTOR(MALE) 9P	1	
P6803		VJP1244T	CONNECTOR(MALE) 4P	1	
P6804		VJP1246T	CONNECTOR(MALE) 6P	1	
P6806		VJP1232T	CONNECTOR(MALE) 5P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R6801,02		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R6803		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6805		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6806		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R6807		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
			SWITCHS		
SW6801,02		VSS0165	SWITCH	2	
SW6804		VSS0165	SWITCH	1	
SW6805,06		VSS0268	SWITCH	2	
			V.RESISTOR		
VR6801		EWAKFKXD3B24	V.RESISTOR 20K	1	
			MISCELLANEOUS		
E52		VGU4575	SW KNOB (B)	5	
	■	VEP06711A	SERVO & SYSTEM CONTROL		(NLA)
			C.B.A.		
			CONNECTOR		
BP4002		VJP1253	CONNECTOR (MALE)	1	
			CAPACITORS		
C3801		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3802		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3803		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C3804		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3805		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C3806		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3807		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C3808		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3809		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C3810		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3811		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3812,13		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
C3814		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3815,16		ECEA1HK010	E.CAPACITOR 50V 1U	2	
C3817		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3818		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C3819		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3820		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C3821		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3822,23		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	2	
C3824		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3825		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3826		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3827		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C3828		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C3829		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3830		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3831		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C3901		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C3902		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3903		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3904		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C3905		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3906		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C3907		ECEA1HKN4R7	E.CAPACITOR 50V 4.7U	1	
C3908		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3909		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3910		ECUM1H010CCN	C.CAPACITOR CH 50V 1P	1	
C3911		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3912		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C3913		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C3914		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3915		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3916-22		ECEA1CK470	E.CAPACITOR 16V 47U	7	
C3923		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3924		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C3925		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3926		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3927		ECQP1H562JZ	P.CAPACITOR 50V 5600P	1	
C3928		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3929		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3930		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3931		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3932		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
C6501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C6502		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C6503		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6504		ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C6505		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C6507		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6509		ECQV1H224JF	P.CAPACITOR 50V 0.22U	1	
C6510		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C6512		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6513		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6514		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C6515		ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C6516		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6517		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6518		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C6519		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6521		ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C6522		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C6523		ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C6524		ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C6525		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C6526		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C6527		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C6528		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C6529		ECEA1CU100	E.CAPACITOR 16V 10U	1	
C6530		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C6531		VCYD1C473MR1	S.CAPACITOR 16V 0.047U	1	
C6532		ECEA1HKN2R2	E.CAPACITOR 50V 2.2U	1	
C6534		ECQV1H683J2	P.CAPACITOR 50V 0.068U	1	
C6537		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C6538		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6539		VCYD1C104MR1	S.CAPACITOR 16V 0.1U	1	
C6540		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C6541		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C6544		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6545		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C6546		ECEA1HU3R3	E.CAPACITOR 50V 3.3U	1	
C6547,48		ECUM1H271KBN	C.CAPACITOR CH 50V 270P	2	
C6549		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C6550		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C6551		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C6552		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C6553		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6554		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C6555		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C6556		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C6557		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6558		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C6559		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C6560		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C6561		ECEA1CU471	E.CAPACITOR 16V 470U	1	
C6562		ECEA1HU3R3	E.CAPACITOR 50V 3.3U	1	
C6563		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6564		ECEA0JU331	E.CAPACITOR 6.3V 330U	1	
			DIODES		
D3801		RD10EB1	DIODE	1	
D3802-04		MA165	DIODE	3	
D3901		MA4056H	DIODE	1	
D3902-05		MA165	DIODE	4	
D6501,02		MA165	DIODE	2	
D6505-09		MA165	DIODE	5	
D6510		MA151K	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D6511		ERA15-01	DIODE	1	
D6512,13		MA165	DIODE	2	
D6514		MA151K	DIODE	1	
D6515-20		MA165	DIODE	6	
D6521		MA151K	DIODE	1	
D6522		MA723	DIODE	1	
D6523		MA700	DIODE	1	
			ICS		
IC3801		BA7021	IC	1	
IC3802		TL8705P	IC	1	
IC3901		AN3916	IC	1	
IC3902		M52055FP	IC	1	
IC3903		AN5421N	IC	1	
IC6501		UPC358G2	IC	1	
IC6502		LM2903M	IC	1	
IC6503		MN6740VCZK7	IC	1	
IC6504		MN1280R	IC	1	
IC6505		LM2903M	IC	1	
			CONNECTORS		
JP6501		VJS2154W	CONNECTOR (FEMALE) 9P	1	
JP6502		VJS2156W	CONNECTOR (FEMALE) 11P	1	
JP6503,04		VJS2157W	CONNECTOR (FEMALE) 12P	2	
JP6506		VJS2571A004	CONNECTOR (FEMALE) 4P	1	
JP6508		VJS2571A012	CONNECTOR (FEMALE) 12P	1	
			COILS		
L3801		VLQEL05F101K	COIL 100UH	1	
L3802		VLQEL05F560K	COIL 56UH	1	
L3803		VLQEL05F470K	COIL 47UH	1	
L3804		VLQEL05F150K	COIL 15UH	1	
L3805		VLQEL05F270K	COIL 27UH	1	
L3806,07		VLQEL05F101K	COIL 100UH	2	
L3808,09		VLQEL05F330K	COIL 33UH	2	
L3810		VLQEL05F101K	COIL 100UH	1	
L3811		VLQEL05F680J	COIL 68UH	1	
L3812		VLQEL05F100J	COIL 10UH	1	
L3901-03		VLQEL05F101K	COIL 100UH	3	
L6501		VLQEL07F222J	COIL 2200UH	1	
L6502		VLQEL05F101K	COIL 100UH	1	
L6503		VLP0074	COIL	1	
			CONNECTORS		
P3901		VJP1235T	CONNECTOR(MALE) 8P	1	
P3902,03		VJP1232T	CONNECTOR(MALE) 5P	2	
P3904		VJP1233T	CONNECTOR(MALE) 6P	1	
P6505		VJS1229T	CONNECTOR(FEMALE) 2P	1	
P6507		VJP1232T	CONNECTOR(MALE) 5P	1	
P6509		VJP1230T	CONNECTOR(MALE) 3P	1	
			PIN		
PK3001		VJR0161	PACK PIN 7P	1	
			TRANSISTORS		
Q3801		2SD636	TRANSISTOR	1	
Q3802		2SB643	TRANSISTOR	1	
Q3803		2SC2206B	TRANSISTOR	1	
Q3804		2SB709	TRANSISTOR CHIP	1	
Q3805		2SC2206B	TRANSISTOR	1	
Q3901		2SD636	TRANSISTOR	1	
Q3902		2SD601	TRANSISTOR CHIP	1	
Q3903		2SB709	TRANSISTOR CHIP	1	
Q3904		2SD601	TRANSISTOR CHIP	1	
Q3905		2SB709	TRANSISTOR CHIP	1	
Q3906-08		2SD601	TRANSISTOR CHIP	3	
Q3909		2SB709	TRANSISTOR CHIP	1	
Q6501,02		2SD601	TRANSISTOR CHIP	2	
Q6506		2SD893	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q6507		2SD973	TRANSISTOR	1	
Q6508		2SD638	TRANSISTOR	1	
Q6509,10		2SB790	TRANSISTOR	2	(R,S)
Q6511,12		2SB709	TRANSISTOR CHIP	2	
Q6513		2SC2206B	TRANSISTOR	1	
			COMBINATIONS		
QR3801-03		UN2212	TRANSISTOR-RESISTOR	3	
QR3901,02		UN2213	TRANSISTOR-RESISTOR	2	
QR6501,02		DTC363EK	TRANSISTOR-RESISTOR	2	
QR6503		UN2213	TRANSISTOR-RESISTOR	1	
QR6507		UN2111	TRANSISTOR-RESISTOR	1	
QR6508		UN2213	TRANSISTOR-RESISTOR	1	
QR6509		UN2113	TRANSISTOR-RESISTOR	1	
QR6510		UN2111	TRANSISTOR-RESISTOR	1	
QR6511,12		UN2213	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R3802		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R3803		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3804		ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R3805		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3806		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R3807		ERTD2ZHL333S	THERMISTOR 33K	1	
R3808		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3809		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3810		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3811		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3812		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R3813		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3814		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R3815		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3816		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R3817		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R3818		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R3819		ERD2FCG390	C.RESISTOR 1/4W 39	1	<!>
R3820		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3821		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3901		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3902		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
R3903		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R3904		ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R3905		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3906		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3907		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3908		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3909		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3910		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3911		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3912		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3913		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R3914		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3915		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R3916		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R3917,18		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R3919		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3920		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3921,22		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	2	
R3923		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R3924		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R3925,26		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	2	
R3927		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3928		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3929		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3930,31		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R3932		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R3933		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3935		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R3936		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3937		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R3938		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3939		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3940		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3941		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3942		ERJ6GEYJ560	M.RESISTOR CH 1/10W 56	1	
R3943		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3944		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6501		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R6502		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6503		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6504		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R6505		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6506		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6507		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6508		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R6509		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R6510,11		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R6512,13		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R6514		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6515		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R6516		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R6519		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6522		ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R6523		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R6524		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6525,26		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R6527		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6528		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6529		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6530		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R6531		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6532		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R6533		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6534		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6535		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6536,37		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R6538		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6539		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R6540		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6541		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6542		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R6543		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6544		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R6545		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6547		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6548		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6549		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R6550-52		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	3	
R6554		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R6555		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R6556		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R6557,58		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	2	
R6559		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R6560,61		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	2	
R6562		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6563		ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
R6564		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6565		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R6566		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R6567		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6568		ERG2SJ180	M.RESISTOR 2W 18	1	
R6569		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R6570		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6571		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6572,73		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R6574		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6575		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R6576		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R6577		ERJ6GEYJ824	M.RESISTOR CH 1/10W 820K	1	
R6578		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R6579		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6580		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6581		ERD2FCG220	C.RESISTOR 2W 22	1	<!>
R6582		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6583		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6584		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6585		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6586,87		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R6588		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6589		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R6590		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R6591,92		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	2	
R6593		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6594		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R6595		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6596		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R6597		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6598		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
			V.RESISTORS		
VR3801,02		EVND4AA00B13	V.RESISTOR 1K	2	
VR3901		EVND4AA00B23	V.RESISTOR 2K	1	
VR3902		EVMF6SA00B23	V.RESISTOR 2K	1	
			CRYSTAL OSCILLATORS		
X3801		VSX0173	CRYSTAL OSCILLATOR	1	
X6501		VSX0244	CRYSTAL OSCILLATOR	1	
	■	VEP07613A	DISPLAY C.B.A.		(NLA)
			CAPACITORS		
C6701		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	FOR VEP66176A
C6702		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	FOR VEP66176A
C6703		ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	FOR VEP66176A
C6701		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	FOR VEP06500G
C6702		ECKF1H471KB	C.CAPACITOR 50V 470U	1	FOR VEP06500G
C6703		ECEA1HK010	E.CAPACITOR 50V 1U	1	FOR VEP06500G
C6704		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	FOR VEP06500G
C7501,02		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C7503		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C7504,05		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C7506		ECEA1HKAR22	E.CAPACITOR 50V 0.22U	1	
C7507		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7520		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C7521		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C7522		ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C7523,24		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	2	
			DIODES		
D6701		PN323B	DIODE	1	
D7503		MA4068	DIODE	1	
D7504-06		MA165	DIODE	3	
D7520-25		MA165	DIODE	6	
D7560		MA165	DIODE	1	
			LED		
D7550		LN81RCPHL	LED	1	
			DISPLAY TUBES		
DP7501		VSL0117	DISPLAY TUBE	1	
DP7502		VSL0197	DISPLAY TUBE	1	
			ICS		
IC6701		UPC2800GR	IC	1	FOR VEP66176A
IC6701		UPC1490HA	IC	1	FOR VEP06500G
IC7501		M50754V4AE	IC	1	
IC7503		MN1280R	IC	1	
IC7505		BA6810S	IC	1	
IC7601		UPC1490HA	IC	1	
			COIL		
L7501		VLQEL05F221K	COIL 220UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
P7501		VJP1249T	CONNECTOR(MALE) 9P	1	
P7503		VJS1679	CONNECTOR(FEMALE) 9P	1	
P7504		VJP1244T	CONNECTOR(MALE) 4P	1	
P7507		VJP1248T	CONNECTOR(MALE) 8P	1	
			CONBINATIONS		
QR7510,11		MRN2403	TRANSISTOR-RESISTOR	2	
QR7517,18		MRN2403	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R6701		ERJ6EKF1363	M.RESISTOR CH 1/10W 136K	1	FOR VEP66176A
R6701		ERDS2TJ154	C.RESISTOR 1/4W 150K	1	FOR VEP06500G
R6702		ERDS2TJ8R2	C.RESISTOR 1/4W 8.2	1	FOR VEP06500G
R6703		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	FOR VEP06500G
R7501		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7503		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R7506		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7507		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7511-14		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	4	
R7515		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7519		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7520-23		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	4	
R7524-27		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	4	
R7528		ERDS1TJ2R7	C.RESISTOR 1/2W 2.7	1	
R7529-32		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	4	
R7533		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7536-39		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	4	
R7540		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R7541		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7542-44		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	3	
R7550		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
R7568		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7569-72		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R7580-88		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	9	
			COMBINATIONS		
RX7501		EXBF11E104J	COMBI.R-R	1	
RX7502		EXBF8E104J	COMBI.R-R	1	
			CRYSTAL OSCILLATOR		
X7501		EF0A4R0M03C2	CERAMIC OSCILLATOR	1	
			MISCELLANEOUS		
E53		KL-04	LED SPACER	1	
E54		VWJ09HW110MM	FLEXIBLE CARD	1	
E55		VSC2059	SHIELD COVER (MAIN)	1	FOR IR RECEIVER C.B.A
E56		VSC1928	SHIELD COVER (BOTTOM)	1	FOR IR RECEIVER C.B.A
	■	VEP08139A	SUB CHROMA C.B.A.		(NLA)
			CAPACITORS		
C8401		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C8402		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C8403		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C8404		ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C8405		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	
C8406		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8407		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C8408		ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
C8409		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C8410		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C8411		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C8412		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C8413		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C8414,15		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C8416		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8417		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C8418		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8419		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C8420		ECUM1H271KBN	C.CAPACITOR CH 50V 270P	1	
C8421		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C8422		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C8423		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C8424		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C8425		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C8426		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C8427		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C8428		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C8433,34		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C8453,54		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C8501		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C8502		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C8503		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C8504		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C8505		ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
C8506		ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C8507		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C8508-10		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C8511		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8512		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C8513		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8514		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C8515		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8516		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C8517		ECUM1H681KBN	C.CAPACITOR CH 50V 680P	1	
C8518		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C8519		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C8520		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C8521		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C8522		ECUM1H080DCN	C.CAPACITOR CH 50V 80P	1	
C8523		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C8524		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C8525		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8526		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C8527,28		ECUM1H471KBN	C.CAPACITOR CH 50V 470P	2	
C8529		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C8530,31		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C8601		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C8602-05		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C8606		ECUM1H561KBN	C.CAPACITOR CH 50V 560P	1	
C8607,08		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C8609		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C8610		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8611		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C8612		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8613		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C8614		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8615		ECUM1H271JSN	C.CAPACITOR CH 50V 270P	1	
C8616		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C8617,18		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C8619		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C8620,21		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C8622		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C8623,24		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C8625		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C8626		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C8627		ECEA10M47	E.CAPACITOR 10V 47U	1	
C8628		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8629		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C8630		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8631		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C8632		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8633		ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C8634		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C8635		ECQB1H332JH	P.CAPACITOR 50V 3300P	1	
C8636		ECUM1H561KBN	C.CAPACITOR CH 50V 560P	1	
C8637		ECQB1H272JH	P.CAPACITOR 50V 2700P	1	
C8638		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C8639		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C8640		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8641		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C8642		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C8643		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C8644		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C8645,46		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
			DIODE		
D8502-04		MA165	DIODE	3	
			DELAY LINES		
DL8401		EFDBR124B23E	DELAY LINE	1	
DL8501		VLD0132A	DELAY LINE	1	
			FILTERS		
FL8401		VLF0330	FILTER	1	
FL8402		ELB4K052	FILTER	1	
FL8501		VLF0330	FILTER	1	
FL8502		ELB4K052	FILTER	1	
FL8601		VLF0646	FILTER	1	
FL8602		VLF0648	FILTER	1	
FL8603		VLF0644	FILTER	1	
FL8604		VLF0647	FILTER	1	
FL8605		VLF0645	FILTER	1	
FL8606		VLF0649	FILTER	1	
FL8607		VLF0643	FILTER	1	
FL8608		VLF0143	FILTER	1	
			ICS		
IC8401		VEFH04E	HIC	1	
IC8501		VEFH04E	HIC	1	
IC8601		BA7107S	IC	1	
IC8602		BA7025L	IC	1	
			COILS		
L8401		VLQEL05F101K	COIL 100UH	1	
L8402		VLQEL05F330J	COIL 33UH	1	
L8403		VLQEL05F101K	COIL 100UH	1	
L8404		VLQEL05F221K	COIL 220UH	1	
L8405		VLQEL05F331K	COIL 330UH	1	
L8406,07		VLQEL05F470J	COIL 47UH	2	
L8409		VLQEL05F150K	COIL 15UH	1	
L8411		VLQEL05F101K	COIL 100UH	1	
L8501,02		VLQEL05F150K	COIL 15UH	2	
L8503		VLQEL05F470J	COIL 47UH	1	
L8504		VLQEL05F101K	COIL 100UH	1	
L8505		VLQEL05F221K	COIL 220UH	1	
L8506		VLQEL05F331K	COIL 330UH	1	
L8507		VLQEL05F470J	COIL 47UH	1	
L8508-10		VLQEL05F101K	COIL 100UH	3	
L8601		VLQEL05F221K	COIL 220UH	1	
L8602		VLQEL05F120J	COIL 12U	1	
L8603		VLQEL05F101K	COIL 100UH	1	
L8604		VLQEL05F221K	COIL 220UH	1	
L8605-07		VLQEL05F101K	COIL 100UH	3	
L8608		VLQEL05F680J	COIL 68UH	1	
L8609		VLQEL07F822J	COIL 8200UH	1	
L8610		VLQEL05F102K	COIL 1000UH	1	
			CONNECTORS		
P8501		VJP1235T	CONNECTOR(MALE) 8P	1	
P8502		VJP1237T	CONNECTOR(MALE) 10P	1	
P8503		VJP1233T	CONNECTOR(MALE) 6P	1	
P8504		VJP1931T	CONNECTOR(MALE) 14P	1	
			TRANSISTORS		
Q8401-04		2SD601	TRANSISTOR CHIP	4	
Q8501-05		2SD601	TRANSISTOR CHIP	5	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q8506		2SB709	TRANSISTOR CHIP	1	
Q8601,02		2SC2295	TRANSISTOR	2	
Q8603		2SB709	TRANSISTOR CHIP	1	
Q8604		2SC2295	TRANSISTOR	1	
Q8606-08		2SD601	TRANSISTOR CHIP	3	
Q8609		2SB709	TRANSISTOR CHIP	1	
Q8610,11		2SD601	TRANSISTOR CHIP	2	
			COMBINATIONS		
QR8401		UN2113	TRANSISTOR-RESISTOR	1	
QR8405		UN2212	TRANSISTOR-RESISTOR	1	
QR8501		UN2112	TRANSISTOR-RESISTOR	1	
QR8502		UN2113	TRANSISTOR-RESISTOR	1	
QR8601		UN2213	TRANSISTOR-RESISTOR	1	
QR8602		UN2113	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R8401		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R8402		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8403		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8404		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8405		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8406		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R8407		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8408		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R8409		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8410		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8411		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8412		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R8413		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8414		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R8415		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R8417,18		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	2	
R8419		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8420		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8421		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R8430		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R8447		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R8449		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R8450		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8501,02		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	2	
R8503		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R8504		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8505		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R8506		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R8507		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R8508		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8509		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8510		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8511		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8512		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R8513		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8514		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8515		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8516		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8517		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R8518		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8519		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R8520		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8521		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R8522		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R8523		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R8524		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R8525		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8526		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R8527,28		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R8601,02		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R8603		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R8604-06		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	3	
R8607		ERJ6GEYJ680	M.RESISTOR CH 1/10W 68	1	
R8608		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R8609		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R8610		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8611		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R8612		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R8613		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R8614		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8615		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R8616		ERJ6GEYG473	M.RESISTOR CH 1/10W 47K	1	
R8617		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8618		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R8619		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8620		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R8621,22		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	2	
R8623,24		ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	2	
R8625		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8626		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R8627		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R8628		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8629		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R8630,31		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	2	
R8632		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R8633		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R8634		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8635		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8636		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8637		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R8638		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R8639		ERJ6GEYJ390	M.RESISTOR CH 1/10W 39	1	
R8640		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R8641		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R8642		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R8643		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8644		ERJ6GEYG473	M.RESISTOR CH 1/10W 47K	1	
R8645		ERTD2FIL154S	THERMISTOR 150K	1	S
R8646		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R8647		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R8648		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R8649		ERJ6GEYG512	M.RESISTOR CH 1/10W 5.1K	1	
R8650		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R8651		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R8652		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R8653		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R8654		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R8655		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8656		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
			TRANSFORMER		
T8601		ELM7Q207A	TRANSFORMER	1	
			CRYSTAL OSCILLATORS		
X8401		VSX0190	CRYSTAL OSCILLATOR	1	
X8501		VSX0160	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
E57		VKC0330	P.C.B. CLIP	1	
	■	VEP00R01A	SUB ANALOGUE C.B.A.		(NLA)
			CAPACITORS		
C951		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C952		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C953		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C954		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C955		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C956		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C957		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C958-60		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C961,62		ECEA0JK470	E.CAPACITOR 6.3V 47U	2	
C963		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C964		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C965,66		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C968		ECEA1HK010	E.CAPACITOR 50V 1U	1	
			FILTER		
FL951		VLF0729	FILTER	1	
			ICS		
IC951		VCR0300	IC	1	
IC952		BA7021	IC	1	
			COILS		
L952		VLQEL05F101K	COIL 100UH	1	
L953		VLQEL05F121K	COIL 120UH	1	
L954		VLQ0188J1R0	COIL 1UH	1	
L955		VLQEL05F101K	COIL 100UH	1	
			CONNECTOR		
P951		VJP1234T	CONNECTOR(MALE) 7P	1	
			TRANSISTORS		
Q951		2SB709	TRANSISTOR CHIP	1	
Q952		2SC2295	TRANSISTOR	1	
Q953		2SB709	TRANSISTOR CHIP	1	
Q954,55		2SD601	TRANSISTOR CHIP	2	
			RESISTORS		
R951		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R952		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R953		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R954,55		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	2	
R956		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R957		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R958		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R959		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R960-62		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	3	
R963		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R964		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R965		ERJ6GEYJ823	M.RESISTOR CH 1/10W 82K	1	
R966		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R967		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R968		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R969		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R970		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R971		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
			V.RESISTORS		
VR951		EVN4YCA00B13	V.RESISTOR 1K	1	
VR952		EVN4YCA00B52	V.RESISTOR 500	1	
VR953		EVN4YCA00B54	V.RESISTOR 50K	1	
			MISCELLANEOUS		
E58		VSC2059	SHIELD COVER (MAIN)	1	
E59		VSC2069	BARRIER	1	
		VEP00Q74A	CYLINDER DRIVE C.B.A.	1	(NLA)
			CAPACITORS		
C2901-03		ECEA1VSN2R2	E.CAPACITOR 35V 2.2U	3	
C2904-06		ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	3	
C2907		ECUM1E683KBM	C.CAPACITOR CH 25V 0.068U	1	
C2908		ECUM1E473KBM	C.CAPACITOR CH 25V 0.047U	1	
C2909		ECQV1H104JS	P.CAPACITOR 50V 0.1U	1	
C2910,11		ECEA1CKS100	E.CAPACITOR 16V 10U	2	
C2912		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C2913		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			IC		
IC2901		AN3814K	IC	1	
			CONNECTORS		
P2901		VJP3011R-F	CONNECTOR(MALE) 15P	1	
P2902		VJP1232T	CONNECTOR(MALE) 5P	1	
			RESISTORS		
R2901		ERX12SJR68	C.RESISTOR 1/2W 0.68	1	
			THERMISTOR		
TH2901		VRH0017	THERMISTOR	1	
	■	VXA3820	MECHANISM CONNECTION C.B.A.		
			IC		
IC1501		ON2170	IC	1	
			RESISTORS		
R1501,02		ERJ8GCYJ223	M.RESISTOR CH 1/8W 22K	2	
			CONNECTORS		
P1504		VJS2342W	CONNECTOR(FEMALE) 13P	1	
P1505		VJP1242T	CONNECTOR(MALE) 2P	1	
			MISCELLANEOUS		
E60		VMA7844	REINFORCEMENT PLATE (F)	1	
E61		VMA7845	REINFORCEMENT PLATE (R)	1	
E62		VMZ1366	PROTECTION SHEET	1	
	■	VEK3578	SUPPLY PHOTO TR. C.B.A.		
			CAPACITOR		
C1501		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
			TRANSISTOR		
Q1501		PN150NVS	TRANSISTOR	1	
			MISCELLANEOUS		
E63		VMD0645	PHOTO TR. HOLDER	1	
	■	-------	TAKE-UP PHOTO TR. C.B.A.		
			CAPACITOR		
C1502		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
			CONNECTOR		
P1503		VJS2165W	CONNECTOR(FEMALE) 6P	1	
			TRANSISTOR		
Q1502		PN150NVS	TRANSISTOR	1	
			RESISTOR		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1503		ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
			MISCELLANEOUS		
E64		VMD0645	PHOTO TR. HOLDER	1	
	■	VEP66163A	REMOTE CONTROLLER C.B.A.		(NLA)
			CAPACITORS		
C1,C2		ECKF1H471KB	C.CAPACITOR 50V 470U	2	
C3		ECEA0GKS101	E.CAPACITOR 4V 100U	1	
			LED		
D1		LN66S	LED	1	
			IC		
IC1		UPD6128C604	IC	1	
			TRANSISTOR		
QR1		UN8231	TRANSISTOR	1	
			RESISTORS		
R1		ERDS2TJ1R0	C.RESISTOR 1/4W 1.0	1	
R2		ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
			CRYSTAL OSCILLATOR		
X1		VSX0167	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
E65		VJR0183	ELECTRODE	2	